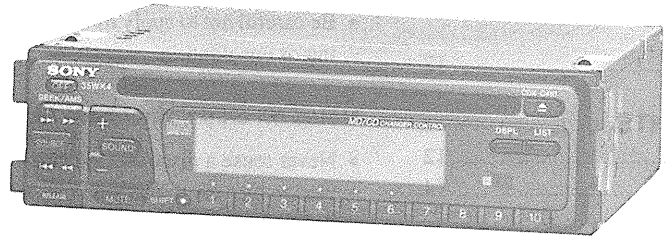
CDX-C410

SERVICE MANUAL

US Model
E Model



Model Name Using Similar Mechanism	NEW
CD Drive Mechanism Type	MG-333X-121
Optical Pick-Up Name	KSS-520A

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS (US Model Only)

POWER OUTPUT AND TOTAL HARMONIC DISTORTION
15 watts per channel minimum continuous average power into 4 ohms, 4 channels driven from 20 Hz to 20 kHz with no more than 1 % total harmonic distortion.

CD player section

System	Compact disc digital audio system
Signal-to-noise ratio	90 dB
Frequency response	10 – 20,000 Hz
Wow and flutter	Below measurable limit
Laser Diode Properties	
Material	GaAlAs
Wavelength	780 nm
Emission Duration	Continuous
Laser output power	Less than 44.6 μW*

* *This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.*

Tuner section

FM

Tuning range	87.5 – 107.9 MHz (US Model) 87.5 – 108.0 MHz (at 50 kHz step) (E Model) 87.5 – 107.9 MHz (at 200 kHz step) (E Model)
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz
Usable sensitivity	8 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	62 dB (stereo), 65 dB (mono)
Harmonic distortion at 1 kHz	0.9 % (stereo), 0.5 % (mono)
Separation	33 dB at 1 kHz
Frequency response	30 – 15,000 Hz
Capture ratio	2 dB

AM

Tuning range	530 – 1,710 kHz (US Model) 531 – 1,602 kHz (at 9 kHz step) (E Model) 530 – 1,710 kHz (at 10 kHz step) (E Model)
Antenna terminal	External antenna connector
Intermediate frequency	10.71 MHz/450 kHz
Sensitivity	30 μV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	35 W × 4 (at 4 ohms)

General

Output lead	Power antenna relay control lead Power amplifier control lead
Tone controls	Bass ±8 dB at 100 Hz Treble ±8 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 188 × 58 × 177 mm ($7\frac{1}{2} \times 2\frac{3}{8} \times 7$ in.) (w/h/d)
Mounting dimensions	Approx. 178 × 50 × 154 mm ($7\frac{1}{8} \times 2 \times 6\frac{1}{8}$ in.) (w/h/d)
Mass	Approx. 1.5 kg (3 lb. 4.9 oz.)
Supplied accessories	Parts for installation and connections (1 set) Front panel case (1)

Design and specifications are subject to change without notice.

FM/AM COMPACT DISC PLAYER

SONY®

SEE ADDITIONAL INFORMATION

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SERVICING NOTES

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

Laser Diode Properties
- Material: GaAlAs
- Wavelength: 780 nm
- Emission Duration: continuous
- Laser Output Power: less than 44.6 μW*
  * This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.

CAUTION

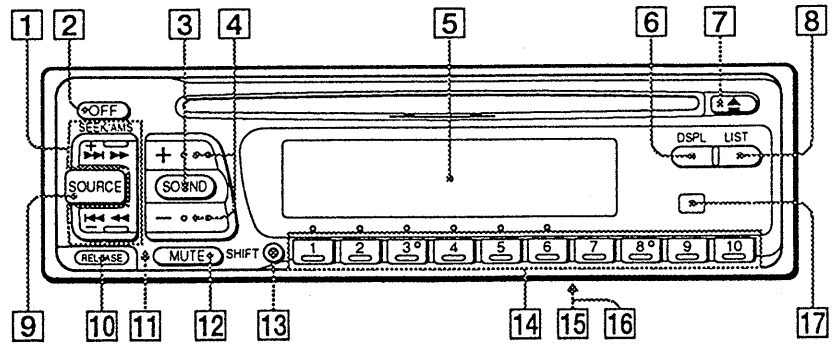
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

This section is extracted from instruction manual.

Location of controls



Refer to the pages for details.

1 SEEK/AMS (seek/Automatic Music Sensor/manual search) button 5, 6, 7, 10, 12

2 OFF button 4, 5

3 SOUND button 8

4 ⊕ ⊖ (volume/bass/treble/balance/fader control) buttons 5, 7, 8, 11

5 Display window

6 DSPL button (display mode change) button 5, 7, 8, 9, 10, 11

7 ⏏ (eject) button 5

8 LIST button
- Disc Memo 11
- List-up 10, 12
- Station Memo 7, 8

9 SOURCE (source select) button 5, 6, 7, 9, 11

10 RELEASE (front panel release) button 4, 14

11 Reset button (located on the front side of the unit hidden by the front panel) 4

12 MUTE button 8

13 SHIFT button
- BTM 6
- PLAY MODE 6, 7, 10, 12
- SET UP 5, 9

14 During radio reception:
Number buttons 6, 7

During CD/MD playback:
Direct disc selection buttons 10

15 POWER SELECT switch (located on the bottom of the unit)
See "POWER SELECT Switch" in the Installation/Connections manual.

16 Frequency Select switch (located on the bottom of the unit) **(E model)**
See "Frequency Select Switch" in the Installation/Connections manual.

17 Receptor for the optional wireless remote

EN

Additional Information

Installation

Instalación

###

Precautions

- Do not tamper with the four holes on the upper surface of the unit. They are for tuner adjustments to be done only by service technicians.
- Choose the installation location carefully so that the unit will not hamper the driver during driving.
- Avoid installing the unit where it would be subject to high temperatures, such as from direct sunlight or hot air from the heater, or where it would be subject to dust, dirt or excessive vibration.
- Use only the supplied mounting hardware for a safe and secure installation.

Mounting angle adjustment

Adjust the mounting angle to less than 20°.

Precauciones

- No toque los cuatro orificios de la superficie superior de la unidad. Estos orificios son para ajustes del sintonizador que solamente deberán realizar técnicos de reparación.
- Elija cuidadosamente el lugar de montaje de forma que la unidad no interfiera las funciones normales de conducción.
- Evite instalar la unidad donde pueda quedar sometida a altas temperaturas, como a la luz solar directa o al aire de calefacción, o a polvo, suciedad, o vibraciones excesivas.
- Para realizar una instalación segura y firme, utilice solamente la ferretería de montaje suministrada.

Ajuste del ángulo de montaje

Ajuste el ángulo de montaje a menos de 20°.

#####

###

How to Detach and Attach the Front Panel

Before installing the unit, detach the front panel.

To detach

Before detaching the front panel, be sure to press the OFF button to turn off the unit. Then press the RELEASE button, slide the front panel a little to the left, and pull it off toward you.

To attach

Align the parts Ⓐ and Ⓑ, and push the front panel until it clicks.

Forma de extraer e instalar el panel frontal

Antes de instalar la unidad, extraiga el panel frontal.

Para extraerlo

Antes de extraer el panel frontal, cerciórese de presionar la tecla OFF para desactivar la unidad. Después, presione la tecla RELEASE, desplase ligeramente el panel frontal hacia la izquierda y tire de él hacia usted.

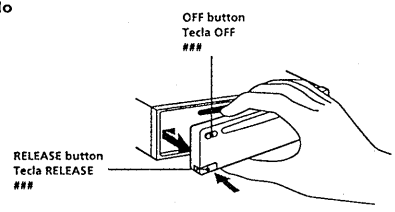
Para instalarlo

Alinee las partes Ⓐ y Ⓑ, y presione el panel frontal hasta que chasquee.

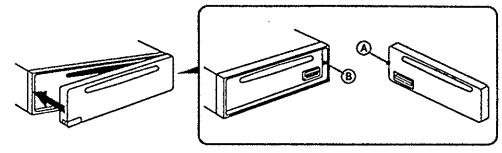
###

###

To detach
Para extraerlo
###



To attach
Para instalarlo
###



Mounting Example

Installation in the dashboard

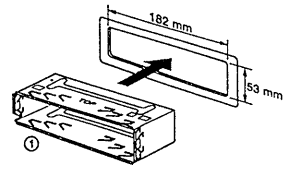
Ejemplo de montaje

Instalación en el salpicadero

###

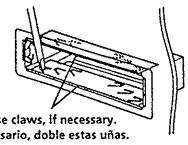
###

1



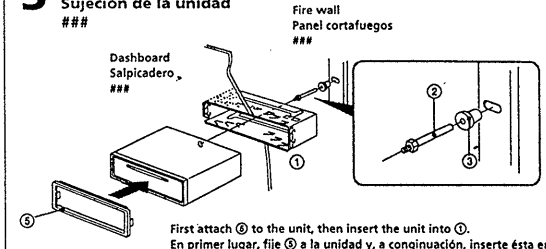
With the TOP marking up
Con la marca TOP hacia arriba.
###

2



Bend these claws, if necessary.
Si es necesario, doble estas uñas.
###

3 **To support the unit**
Sujeción de la unidad
###



First attach ⑤ to the unit, then insert the unit into ①.
En primer lugar, fije ⑤ a la unidad y, a conginuación, inserte ésta en ①.
###

Connections

Conexiones

####

Caution

- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the **yellow** and **red** power input leads only after all other leads have been connected.
- Be sure to connect the red power input lead to the positive 12 V power terminal which is energized when the ignition key is in the accessory position.
- **Run all ground wires to a common ground point.**

Precauciones

- Esta unidad ha sido diseñada para alimentarse con 12 V CC, negativo a masa, solamente.
- Antes de realizar las conexiones, desconecte el terminal de puesta a masa de la batería del automóvil a fin de evitar cortocircuitos.
- Conecte los cables de entrada de alimentación **amarillo** y **rojo** solamente después de haber conectado los demás.
- Cerciórese de conectar el cable de entrada de alimentación rojo a un terminal de 12 V positivo que se energice al poner la llave de encendido en la posición para accesorios.
- **Conecte todos los conductores de puesta a masa a un punto común.**

###

- ###

If Your Car has No Accessory Position on the Ignition Key Switch — POWER SELECT Switch

The illumination on the front panel is factory-set to be turned on even when the unit is not being played. However, this setting may cause some car battery wear **if your car has no accessory position on the ignition key switch.** To avoid this battery wear, **set the POWER SELECT switch located on the bottom of the unit to the ❽ position, then press the reset button.** The illumination is reset to stay off while the unit is not being played.

Note

The caution alarm for the front panel is not activated when the POWER SELECT switch is set to the ❽ position.

Si el automóvil no dispone de posición para accesorios en la llave de encendido — Selector POWER SELECT

La iluminación del panel frontal ha sido ajustada en fábrica para que esté activada aunque la unidad no se encuentre en reproducción. Sin embargo, este ajuste puede provocar cierta descarga de la batería del automóvil **si éste no dispone de posición para accesorios en la llave de encendido.** Para evitar esto, **ponga el selector POWER SELECT, situado en la base de la unidad, en la posición ❽ y, después, presione el botón de reposición.** La iluminación estará desactivada cuando la unidad no se encuentre en reproducción.

Nota

La alarma de precaución del panel frontal no se activará cuando el selector POWER SELECT se encuentre en la posición ❽.

###

Frequency Select Switch (E model)

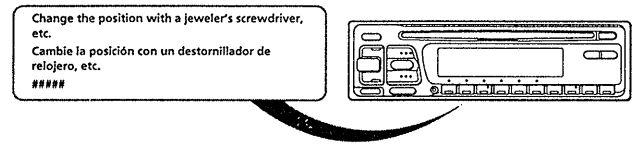
The AM (FM) tuning interval is factory-set to the 9K (50 K) position. If the frequency allocation system of your country is based on 10 kHz (200 kHz) interval, set the switch on the bottom of the unit to the 10 K (200 K) position before making connections.

Selector de frecuencia

El intervalo de sintonía de AM (FM) ha sido ajustado en fábrica a la posición 9 K (50 K). Si el sistema de asignación de frecuencias de su país se basa en el intervalo de 10 kHz (200 kHz), ponga este selector, situado en la base de la unidad, en la posición 10 K (200 K) antes de realizar las conexiones.

###

###



Reset Button

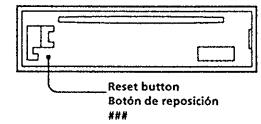
When the installation and connections are over, be sure to press the reset button with a ballpoint pen etc.

Botón de reposición

Cuando finalice la instalación y las conexiones, cerciórese de presionar el botón de reposición con un bolígrafo, etc.

###

###

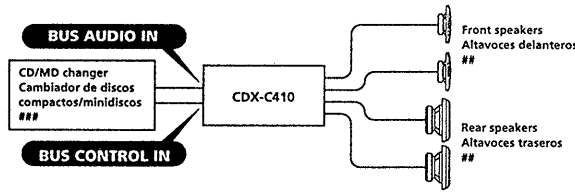


Connection Diagram

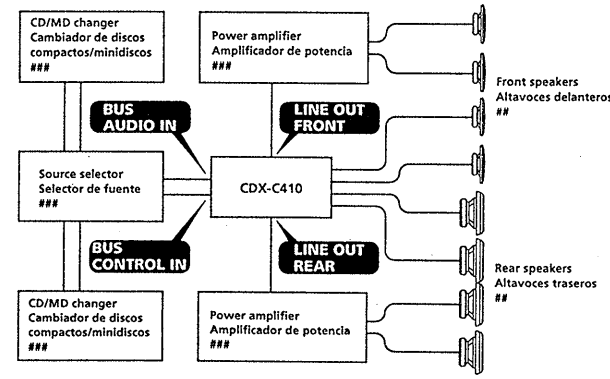
Diagramas de conexión

###

Example 1
Ejemplo 1
##



Example 2
Ejemplo 2
##



For connecting two or more changers, the source selector XA-U120 (optional) and the BUS cable RC-61 (1 m) or RC-62 (2 m) (optional) are necessary.

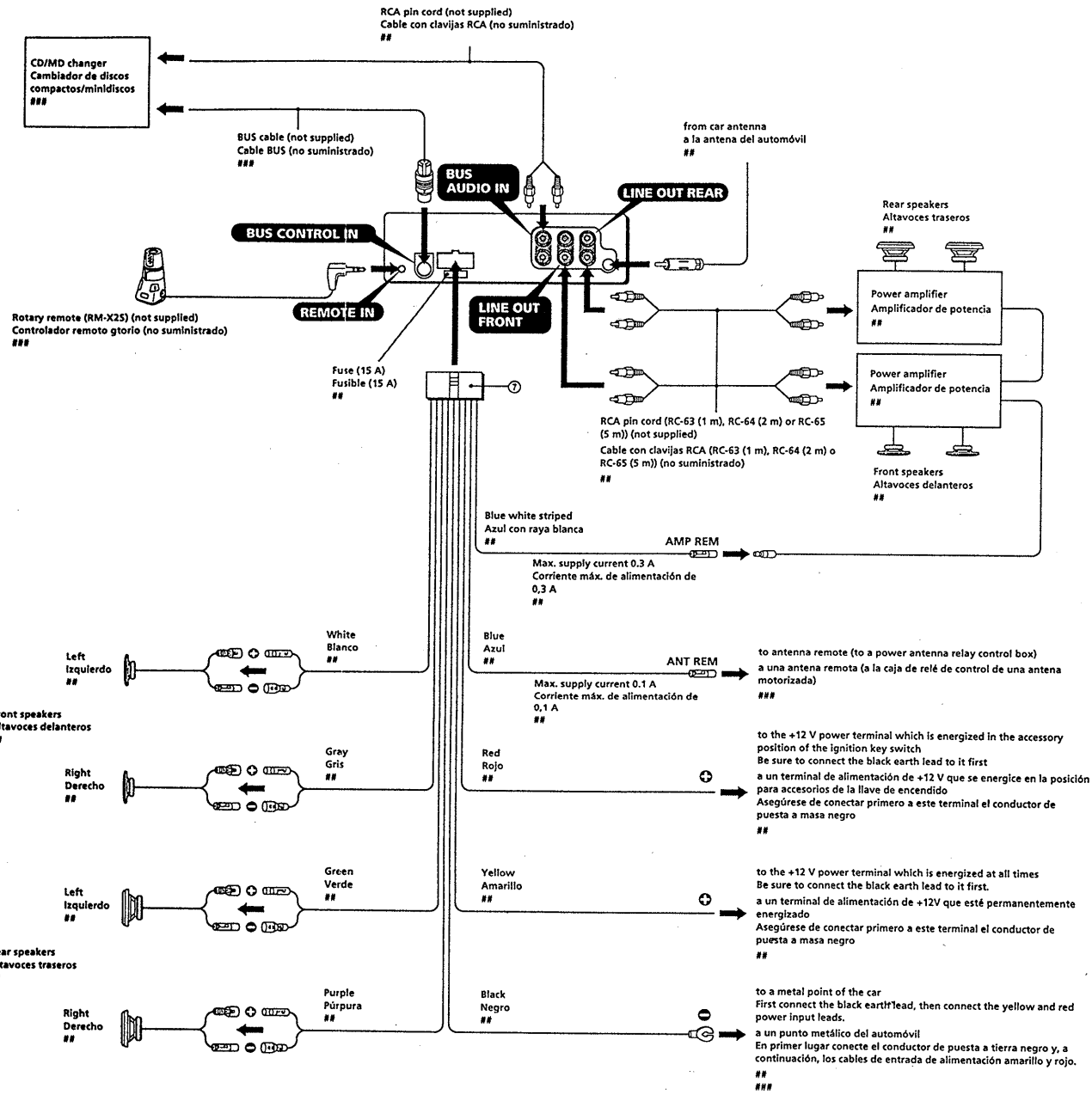
Cuando desee conectar dos o más cambiadores, necesitará un selector de fuente XA-U120 (opcionales) y un cable BUS RC-61 (1 m) o RC-62 (2 m) (opcionales).

####

Connection Example

Ejemplo de conexiónes

###



Notes on the control leads

- *The power antenna control lead (blue) supplies +12 V DC when you turn on the unit.*
- *A power antenna without relay box cannot be used with this unit.*

Memory hold connection

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

Notes on speaker connection

- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.*
- *Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.*

Notas sobre conductores de control

- *El conductor de control de la antena motorizada (azul) suministrará +12 V CC cuando conecte la alimentación de la unidad.*
- *Con esta unidad no podrá emplearse una antena motorizada desprovista de caja de relé.*

Conexión para protección de la memoria

Si conecta el cable de entrada de alimentación amarillo, el circuito de la memoria siempre recibirá alimentación, aunque ponga la llave de encendido en la posición OFF.

Notas sobre la conexión de los altavoces

- *Antes de conectar los altavoces, desconecte la alimentación de la unidad.*
- *Utilice altavoces con una impedancia de 4 a 8 ohmios, y con la potencia admisible adecuada, ya que de lo contrario podría dañarlos.*
- *No conecte los terminales del sistema de altavoces al chasis del automóvil, ni los del altavoz derecho a los del izquierdo.*
- *No intente conectar los altavoces en paralelo.*
- *No conecte altavoces activos (con amplificadores incorporados) a los terminales de altavoces de la unidad. Si lo hiciese, podría dañar tales altavoces. Por lo tanto, cerciórese de conectar altavoces pasivos a estos terminales.*

###

- ###

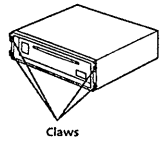
Mounting the Unit in a Japanese Car
Montaje de la unidad en un automóvil japonés
####

You may not be able to install this unit in some makes of Japanese cars. In such a case, consult your Sony dealer.

Usted no podrá instalar esta unidad en algunos automóviles japoneses. En tal caso, consulte a su proveedor Sony.

#####

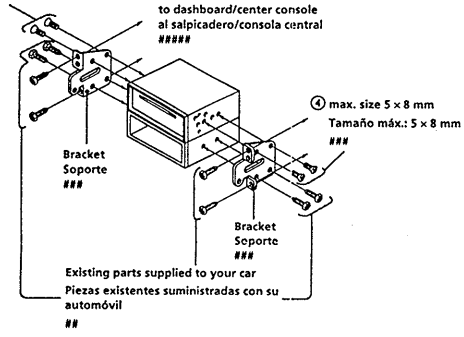
1 **With nippers or similar, cut off the claws on both side of the unit.**
Con unas tenazas o una herramienta similar, corte los ganchos de ambos lados de la unidad.
###



Claws
Ganchos
####

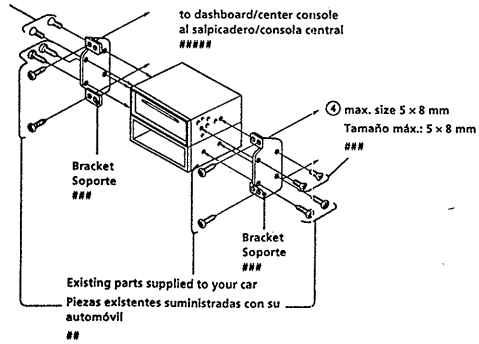
2 **TOYOTA**

④ max. size 5 × 8 mm
Tamaño máx.: 5 × 8 mm
###



NISSAN

④ max. size 5 × 8 mm
Tamaño máx.: 5 × 8 mm
###



Note
To prevent malfunction, install only with the supplied screws ④ and use existing parts supplied to your car.

Nota
Para evitar que se produzcan fallos, realice la instalación solamente con los tornillos suministrados ④ y utilice los componentes suministrados para el automóvil.

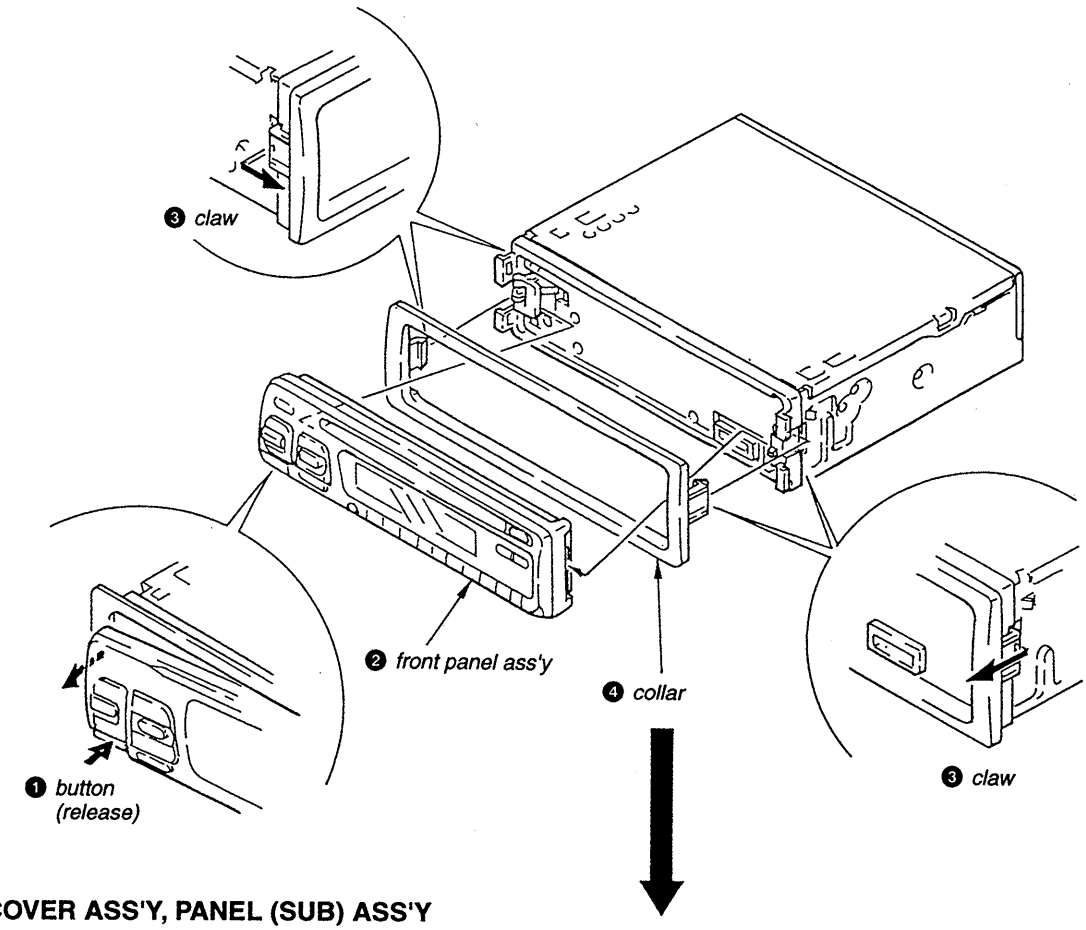
###
###

SECTION 2

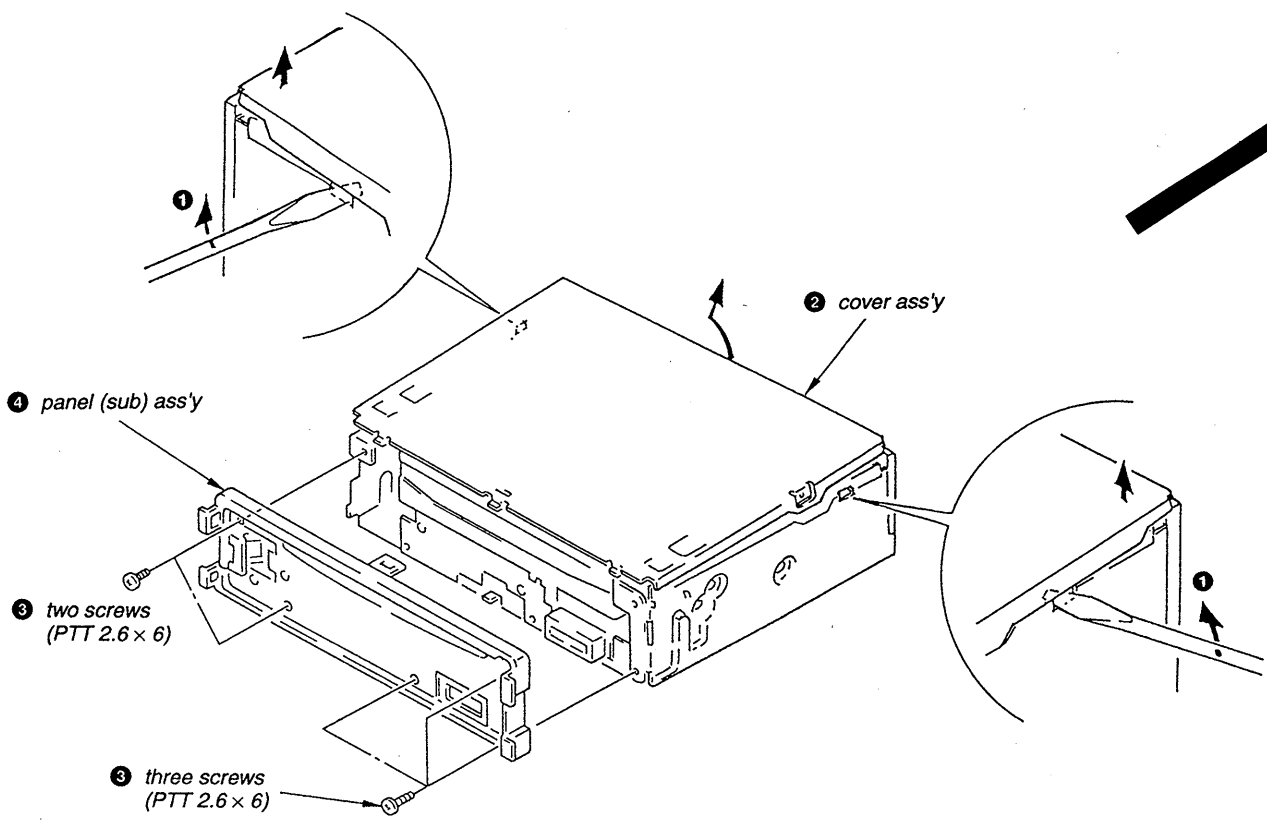
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

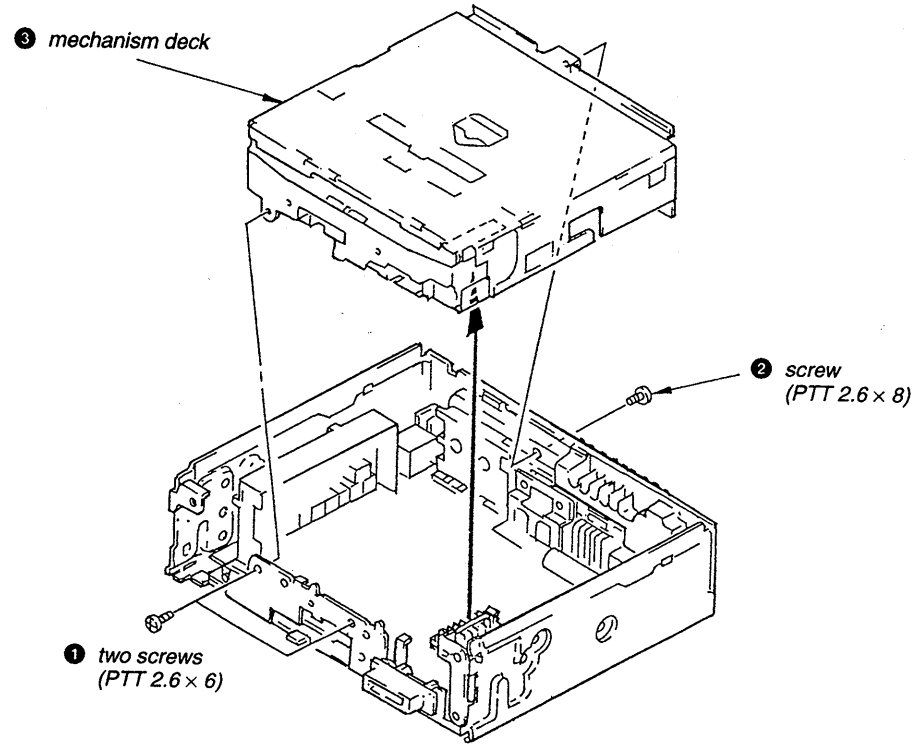
FRONT PANEL ASS'Y AND COLLAR



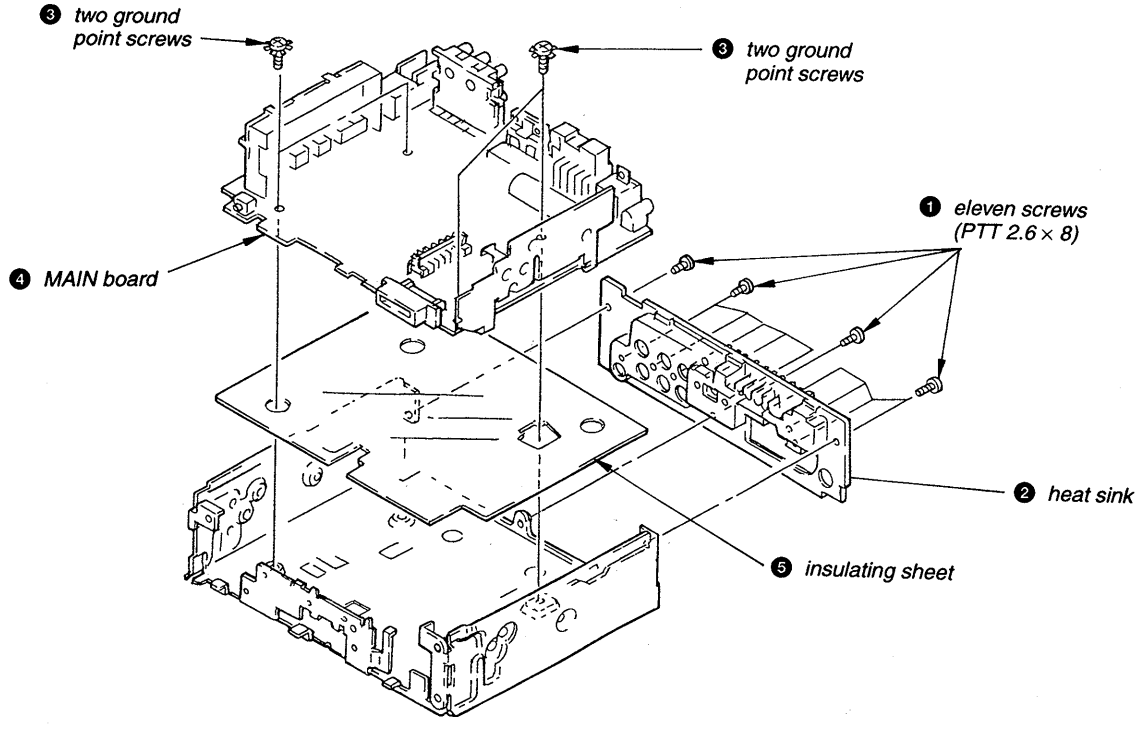
COVER ASS'Y, PANEL (SUB) ASS'Y



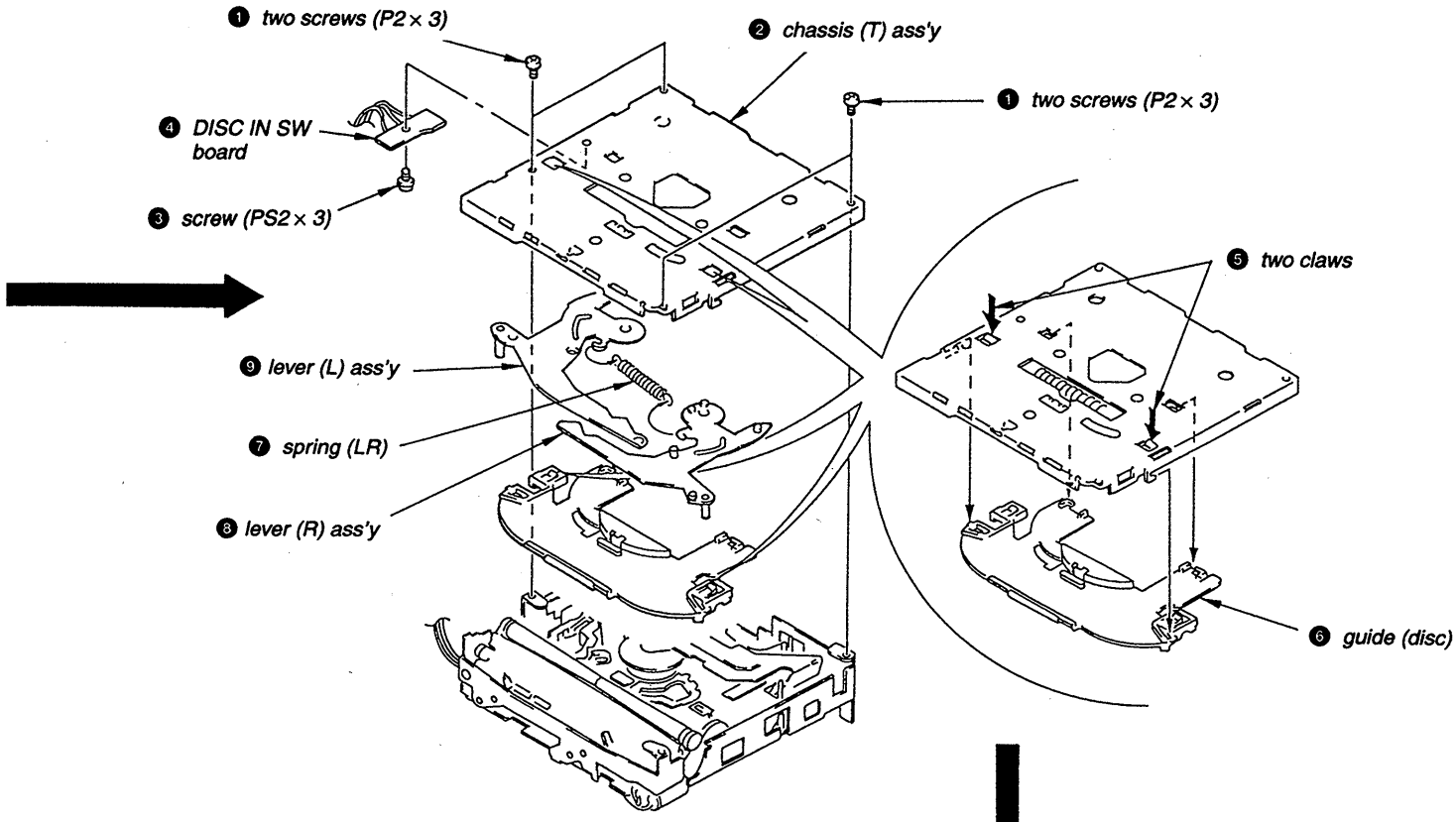
MECHANISM DECK



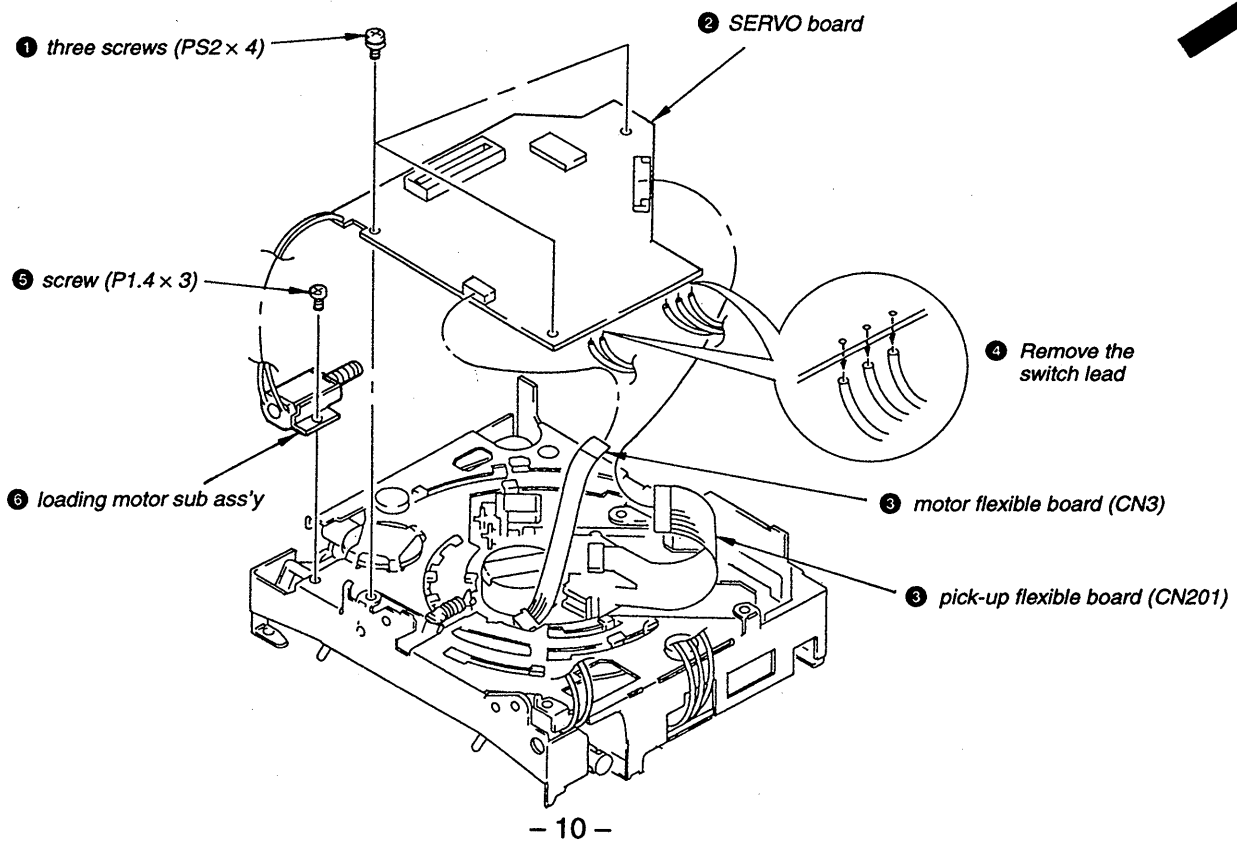
MAIN BOARD



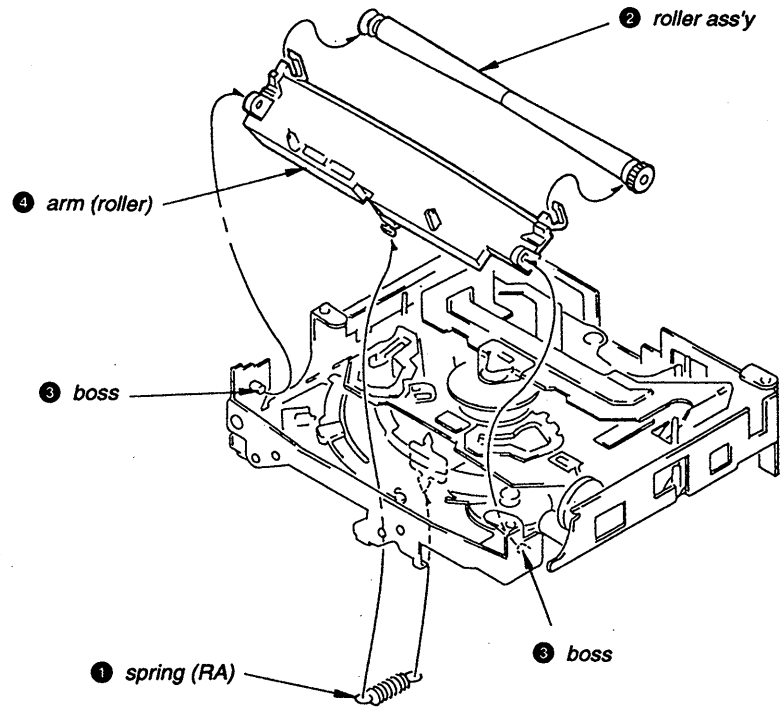
CHASSIS (T) ASS'Y


❶ two screws (P2 × 3)
❷ chassis (T) ass'y
❶ two screws (P2 × 3)
❹ DISC IN SW board
❸ screw (PS2 × 3)
❺ two claws
❾ lever (L) ass'y
❼ spring (LR)
❽ lever (R) ass'y
❻ guide (disc)

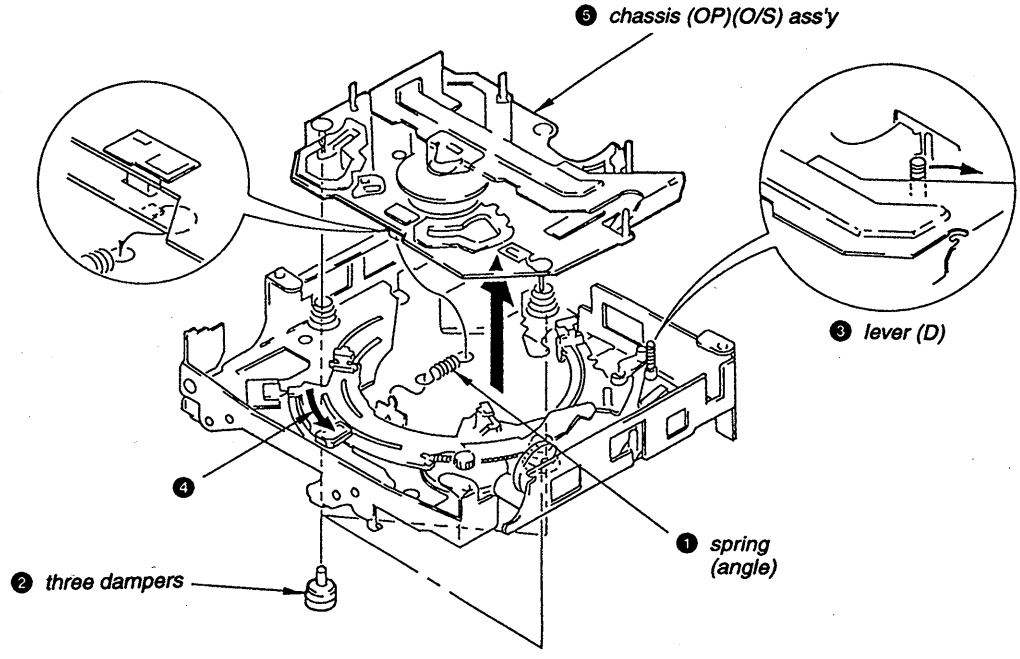
SERVO BOARD, LOADING MOTOR


❶ three screws (PS2 × 4)
❷ SERVO board
❺ screw (P1.4 × 3)
❹ Remove the switch lead
❻ loading motor sub ass'y
❸ motor flexible board (CN3)
❸ pick-up flexible board (CN201)

ROLLER ASS'Y, ARM (ROLLER)



CHASSIS (OP)(O/S) ASS'Y



SECTION 3
TEST MODE

This set have the test mode function. In the test mode, FM Auto Scan/Stop Level and AM Auto Scan/Stop Level adjustments can be performed easier than it in ordinary procedure.

Set the Test Mode

1. Set the "OFF" mode.
2. Push the preset [4] button.
3. Push the preset [5] button.
4. Press the preset [1] button for two seconds.
5. Then the display indicates all lights, the test mode is set.

Release the Test Mode

1. Push the [OFF] button.

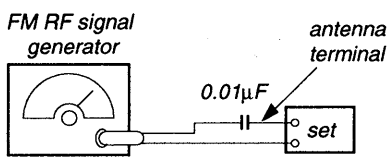
SECTION 4
ELECTRICAL ADJUSTMENTS

TUNER SECTION | **0dB=1μV**

Cautions during repair
When the front end is defective, replace it by a new one because its internal block is difficult to repair.

FM Auto Scan/Stop Level Adjustment

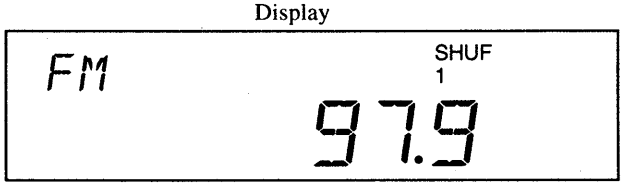
Setting:
[SOURCE] button: FM
CHANNEL SPACE switch (E model): 10 k



Carrier frequency : 97.9MHz
Output level : 22dB(12.6 μV)
Mode : mono
Modulation : 1kHz, 75kHz deviation

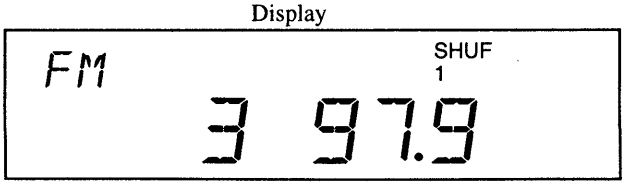
Procedure:
1. Set to the test mode.
2. Push the [SOURCE] button and set to FM.

Display



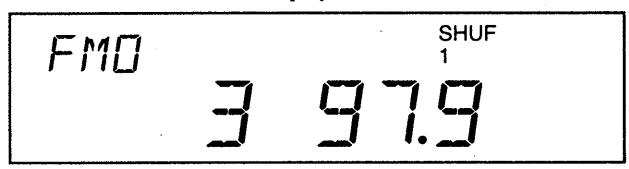
3. Push the preset [3] button.

Display



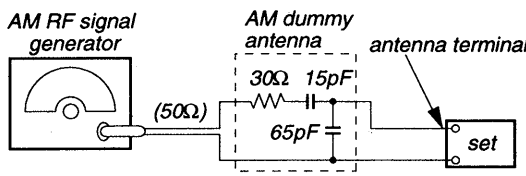
4. Adjust with the volume RV2 on TU1 so that the "FM" indication turns to "FM0" indication on the display window. But, in case of already indicated "FM0", turn the RV2 so that put out light "0" indication and adjustment.

Display



AM Auto Scan/Stop Level Adjustment

Setting:
[SOURCE] button: AM
CHANNEL SPACE switch (E model): 10k



Carrier frequency : 1000kHz

30% amplitude modulation by 400Hz signal
Output level : 35dB (56.2 μV)

Procedure:
1. Set to the test mode.
2. Push the [SOURCE] button and set to AM .

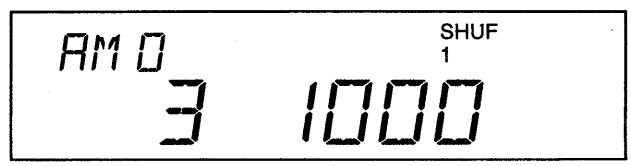
Display

3. Push the preset [3] button.

Display

4. Adjust with the volume RV1 on TU1 so that the "AM" indication turns to "AM0" indication on the display window. But, in case of already indicated "AM0", turn the RV1 so that put out light "0" indication and adjustment.

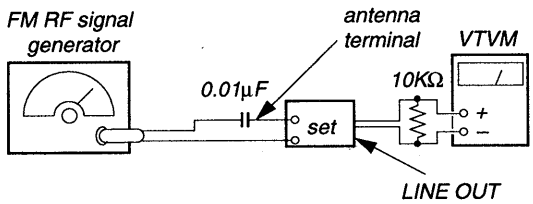
Display



FM Noise Focus Adjustment

Setting:

SOURCE button: FM



Carrier frequency : 97.9MHz
Output level : 60dB(1mV)
Mode : mono
Modulation : 1kHz, 75kHz deviation

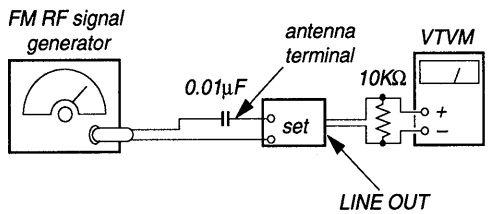
Procedure:

1. Tune the 97.9 MHz .
2. The then output level is supposing that (A) dB.
3. Adjust with the volume RV3 on TU1 so that the output level is (A) –30dB then signal generator input set to –20dB.

FM Stereo Separation Adjustment

Setting:

SOURCE button: FM



Carrier frequency : 97.9MHz
Output level : 60dB(1mV)
Mode : stereo
Modulation : main: 1kHz, 75kHz deviation (100%)
19kHz pilot: 7.5kHz deviation (10%)

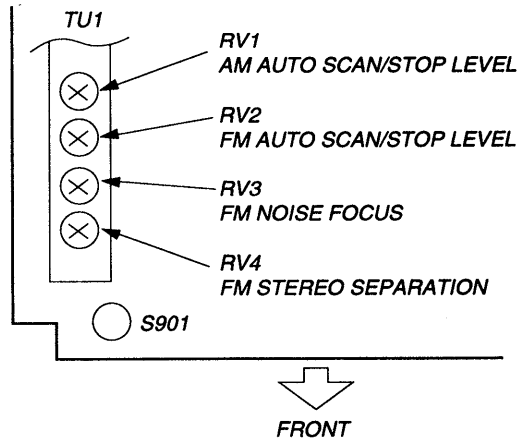
Procedure:

FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV4 on TU1 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV4 on TU1 for minimum reading.

L-CH Stereo separation: Ⓐ–Ⓑ
R-CH Stereo separation: Ⓒ–Ⓓ
The separation of both channels should be equal.

Specification: Separation more than 28dB

Adjustment Location:



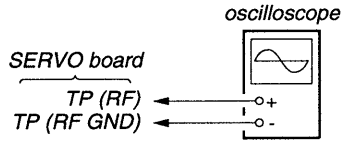
CD SECTION

Note:

1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10 MΩ impedance.
4. Clean an objective lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

Focus Bias Adjustment

Setting: This adjustment is performed with the set placed horizontally.

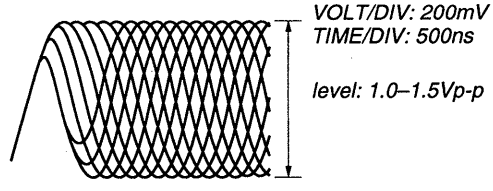


Procedure:

1. Connect an oscilloscope between TP (RF) and TP (RF GND) on the SERVO board.
2. Connect the power supply.
3. Push the RESET button (S901) on the main board.
4. Insert the disc (YEDS-18) and playback.
5. Adjust RV1 so that the oscilloscope waveform is clear and check RF signal level is correct or not.

Note: Clear RF signal waveform means that the sharp "◇" can be clearly distinguished at the center of the waveform.

RF signal waveform



- When observing the eye pattern, set the oscilloscope to AC range and raise the vertical sensitivity so that it may be easily seen.

Focus Gain Adjustment (Coarse adjustment)

This adjustment is not required unless the following parts are replaced:

- Optical pick-up
- RV4

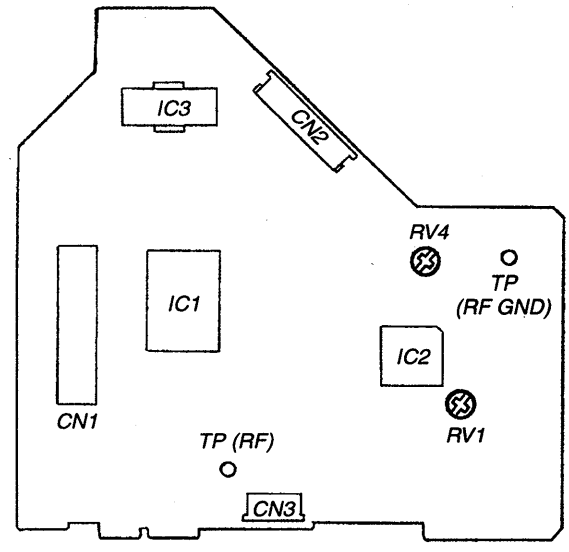
Adjustment:

1. Set RV4 to the standard position. (mechanical center)
2. Check whether operation noise (while noise type) caused by the double-axis device (lens section of the optical pick-up) is abnormally loud.
   If the operation noise is too loud, turn RV4 slightly counterclockwise.

- If the gain is too low:
  Focus does not function and no music is selected.
- If the gain is too high:
  Noise caused by scratches and dust is heard and the operation becomes unstable.

Adjsutment Location:

– SERVO BOARD –

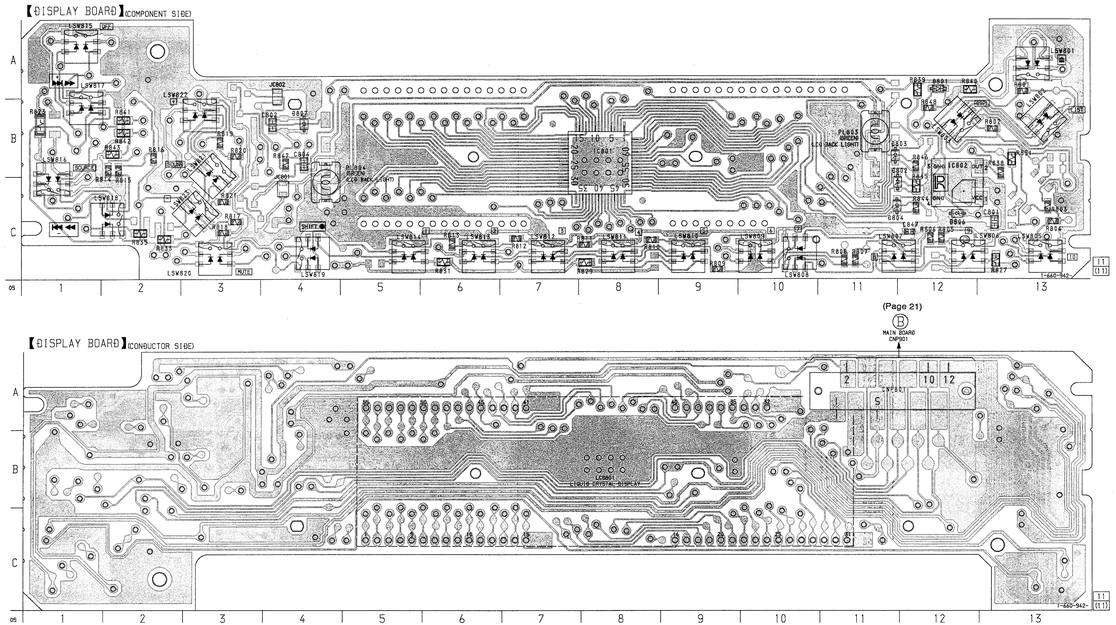


SECTION 5
DIAGRAMS

5-1. PRINTED WIRING BOARD – DISPLAY Section – • See page 19 for Circuit Boards Location.

• **Semiconductor Location**

Ref. No.	Location
D801	A-12
D802	B-11
D803	B-11
D804	C-11
D806	C-12
D807	B-4
IC801	B-8
IC802	B-12



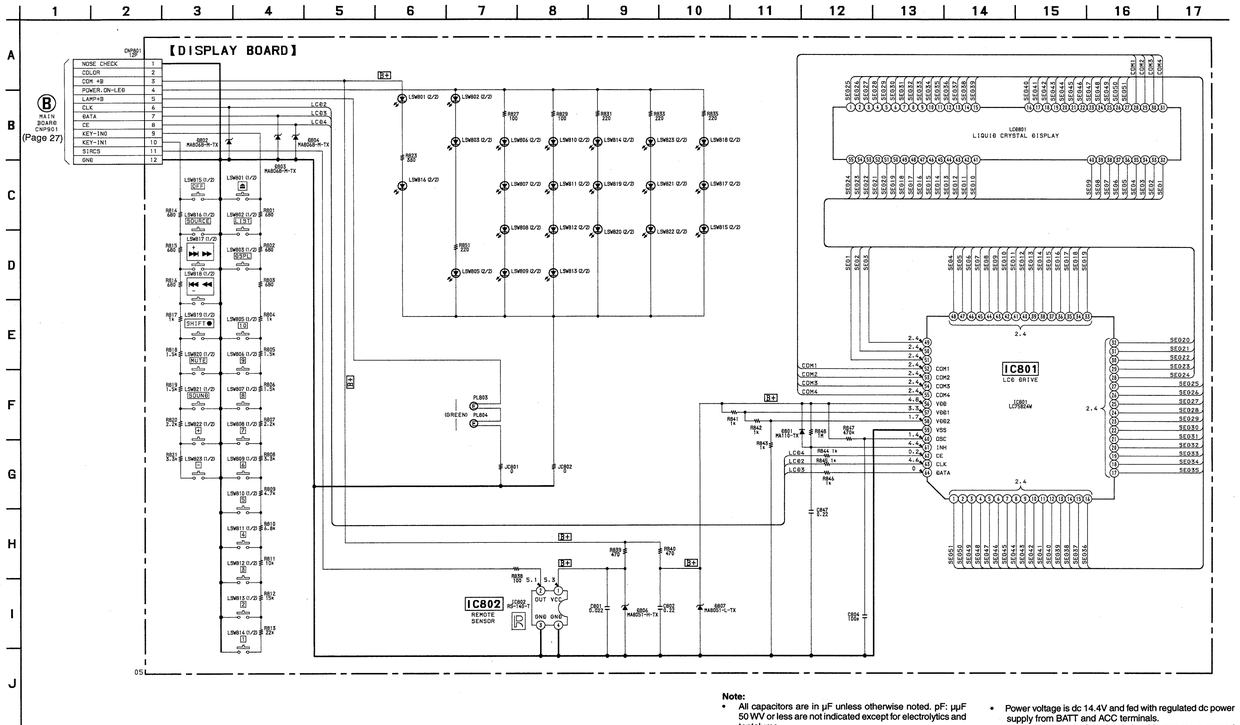
Note:
- ○—— : parts extracted from the component side.
- ▒▒▒ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:

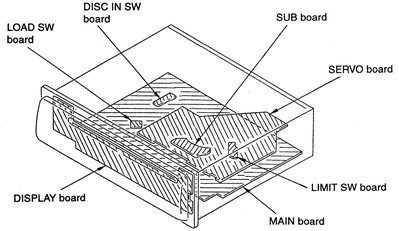
Pattern face side: (Conductor side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component side)	Parts on the parts face side seen from the parts face are indicated.

5-2. SCHEMATIC DIAGRAM – DISPLAY Section –



Note:
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in and ¼ W or less unless otherwise specified.
- B+ : B+ Line.
- : panel designation.
- Power voltage is dc 14.4V and fed with regulated dc power supply from BATT and ACC terminals.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no-mark : FM
- Voltages are taken with a VOM (10 M /V).
  Voltage variations may be noted due to normal production tolerances.

• **Circuit Boards Location**



Note:
- ○——: parts extracted from the component side.
- △ : internal component.
- ▒▒▒ : Pattern from the side which enables seeing.

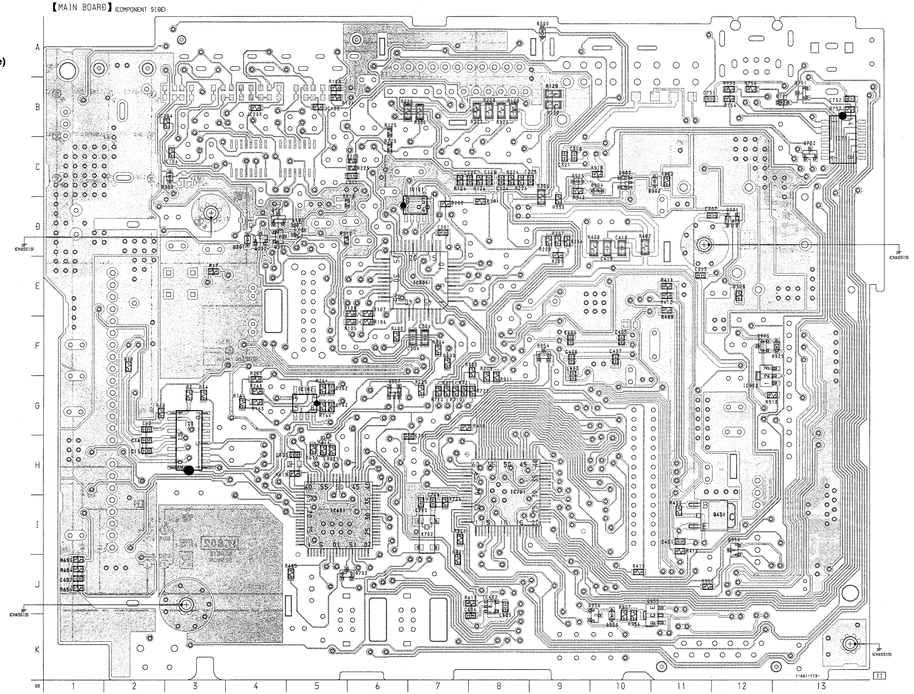
(The other layers' patterns are not indicated.)

Caution:
Pattern face side: (Conductor side) Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component side) Parts on the parts face side seen from the parts face are indicated.

5-3. PRINTED WIRING BOARD – MAIN Section –

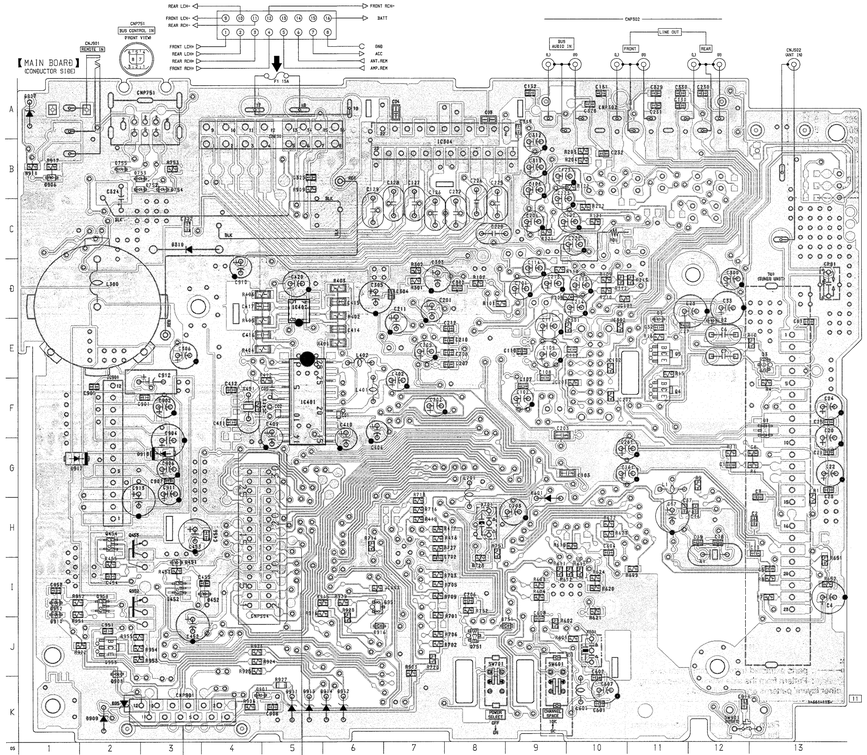
• **Semiconductor Location (Component Side)**

Ref. No.	Location
D300	A-9
D301	D-4
D302	C-3
D701	B-13
D702	J-6
D902	C-11
D903	C-9
D904	C-10
D905	F-12
D925	F-13
D953	K-10
D954	F-9
IC3	G-3
IC101	D-7
IC102	G-5
IC301	E-7
IC601	I-5
IC602	J-8
IC701	H-8
IC751	C-13
IC902	G-12
Q101	D-4
Q102	D-5
Q201	D-4
Q202	D-4
Q301	D-12
Q451	I-12
Q701	B-13
Q752	C-13
Q902	C-10
Q954	I-12
Q955	J-11
Q956	K-10
Q957	G-6



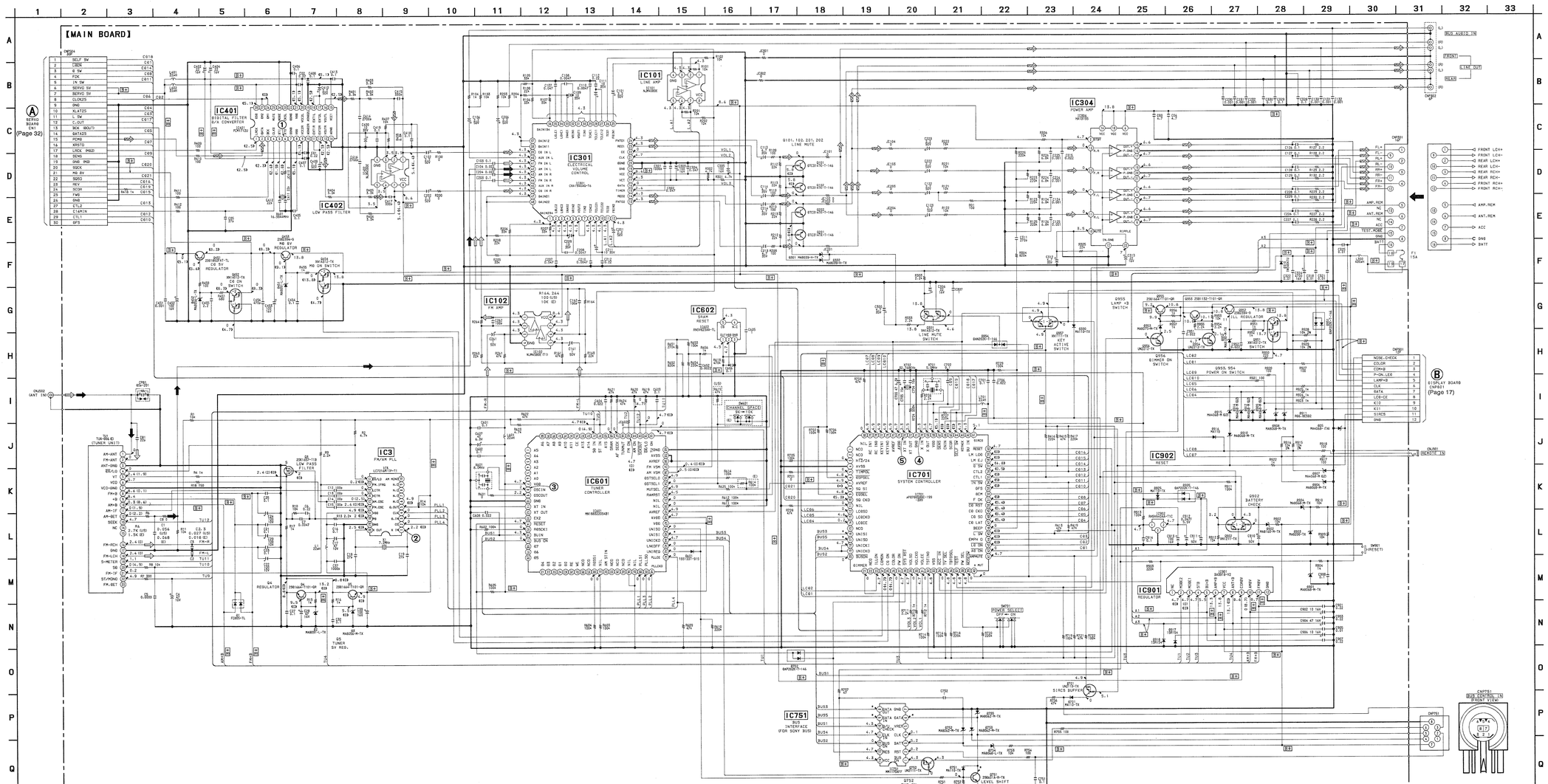
• **Semiconductor Location (Conductor Side)**

Ref. No.	Location
D1	F-13
D2	E-12
D3	E-11
D05	K-2
D310	C-3
D451	I-3
D452	I-3
D601	H-9
D751	J-9
D752	B-3
D753	B-3
D754	B-3
D755	B-2
D901	K-4
D906	B-1
D907	A-1
D908	J-2
D909	K-2
D910	I-1
D911	K-5
D912	K-6
D914	K-6
D915	K-5
D916	J-6
D917	G-1
D918	G-3
D951	I-6
D952	I-1
IC304	B-7
IC401	F-5
IC402	D-5
IC901	E-2
Q3	E-13
Q4	F-11
Q5	E-11
Q452	I-3
Q453	H-3
Q454	H-2
Q751	J-8
Q951	I-2
Q952	I-3
Q953	J-2



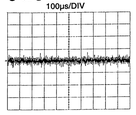
5-4. SCHEMATIC DIAGRAM – MAIN Section –

• See page 38 for IC Block Diagrams.

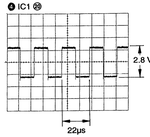


• Waveforms

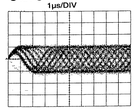
❶ IC2 ① 200mV/DIV
100µs/DIV



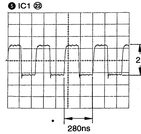
❹ IC1 ㉘



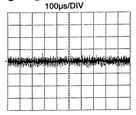
❷ IC1 ㉚ 0.5V/DIV
1µs/DIV



❺ IC1 ㉙



❸ IC1 ㉘ 200mV/DIV
100µs/DIV

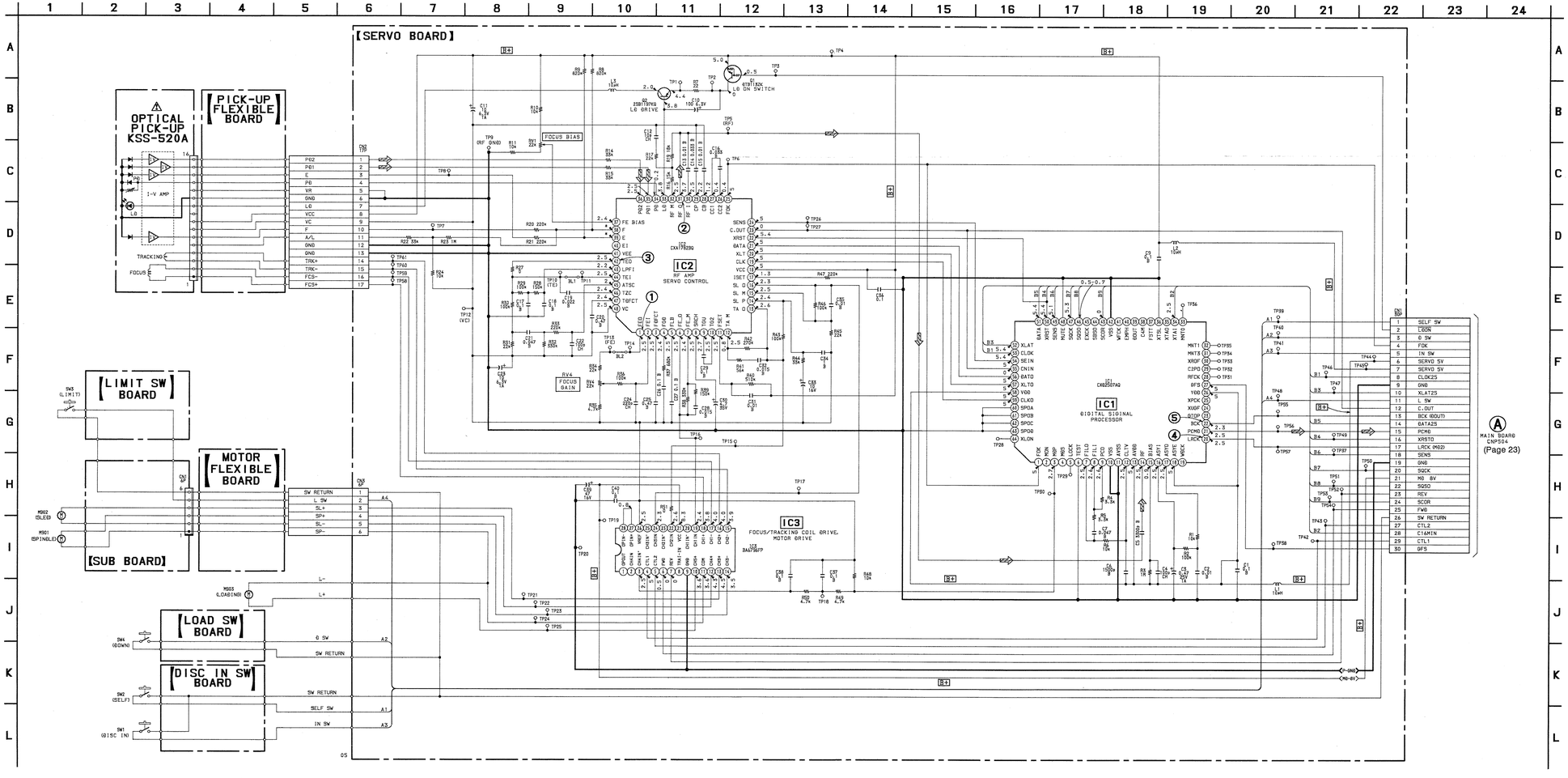


Note:
- All capacitors are in µF unless otherwise noted. pF: µµF
  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.

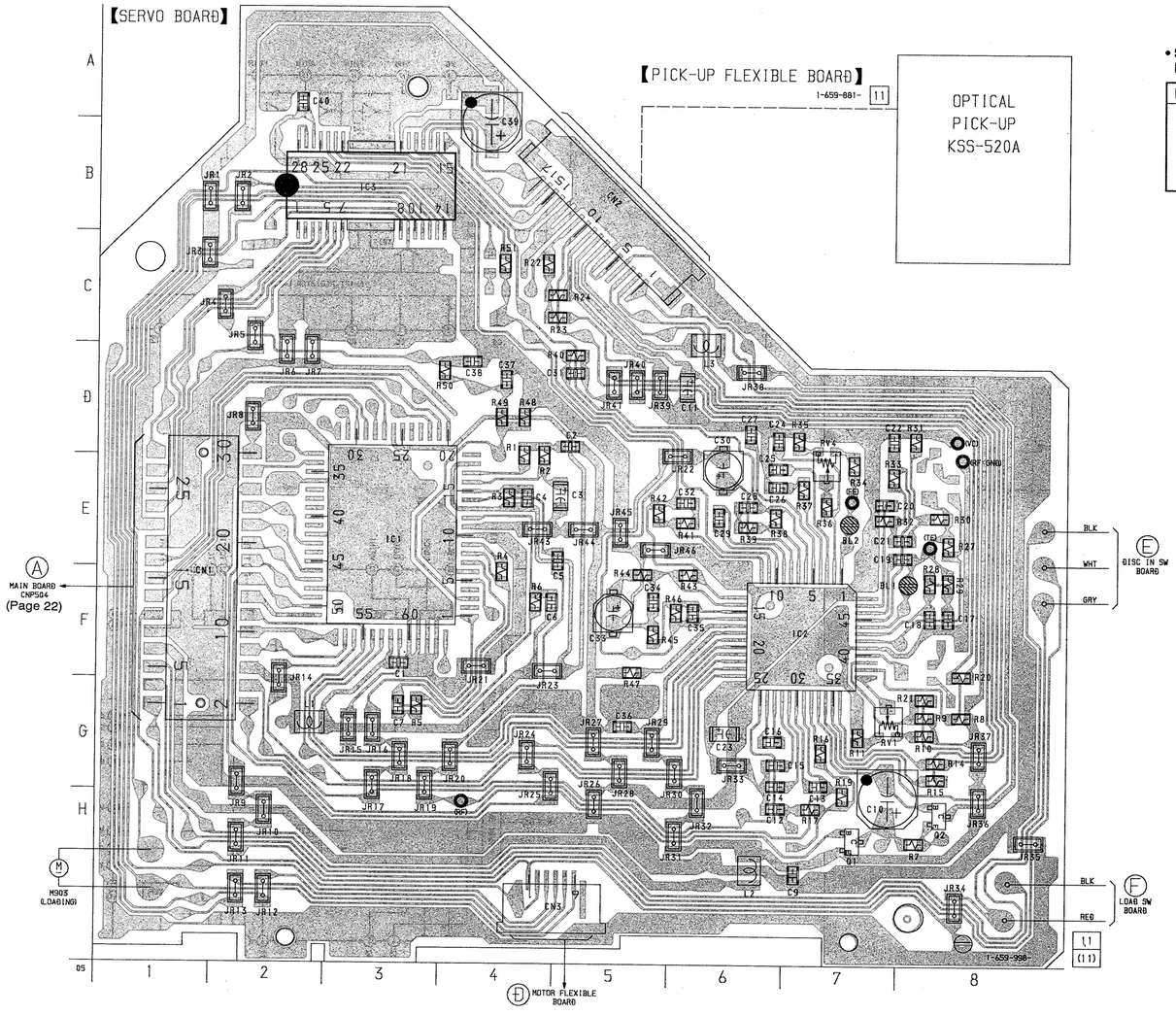
Note: The components identified by mark ⚠ or otted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line.
- : adjustment for repair.
- Power voltage is dc 14.4 V and fed with regulated dc power supply from ACC and BATT terminals.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : CD
  * : Impossible to measure
- Voltages are taken with a VOM (10 MΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ :CD

5-5. SCHEMATIC DIAGRAM – MECHANISM DECK Section – • See page 36 for IC Block Diagrams.

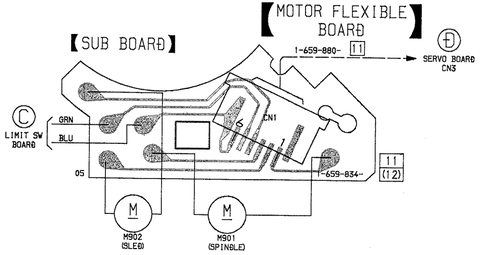


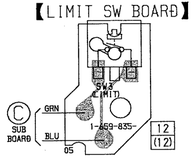
5-6. PRINTED WIRING BOARD – MECHANISM DECK Section – • See page 19 for Circuit Boards Location.

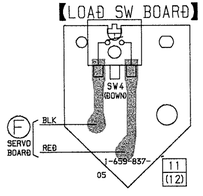


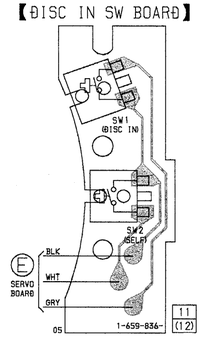
• Semiconductor Location

Ref. No.	Location
IC1	E-3
IC2	F-7
IC3	B-3
Q1	H-7
Q2	H-8







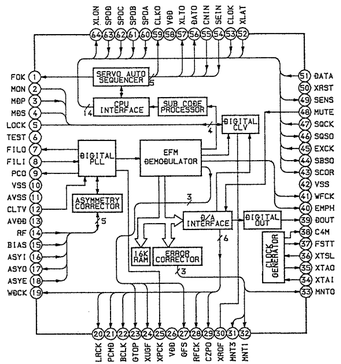


• ○—— : parts extracted from the component side.
• —— : parts extracted from the conductor side.
• ▒▒▒ : Pattern from the side which enables seeing.

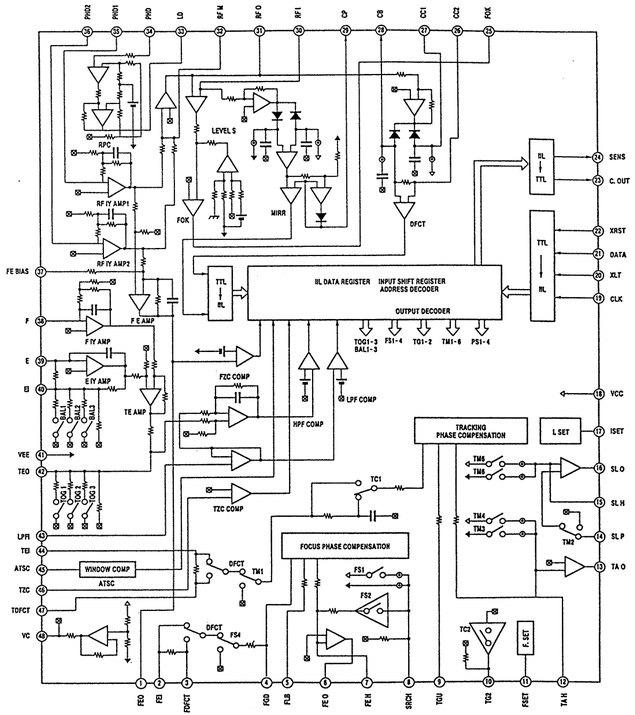
• IC Block Diagrams

– MECHANISM DECK Section –

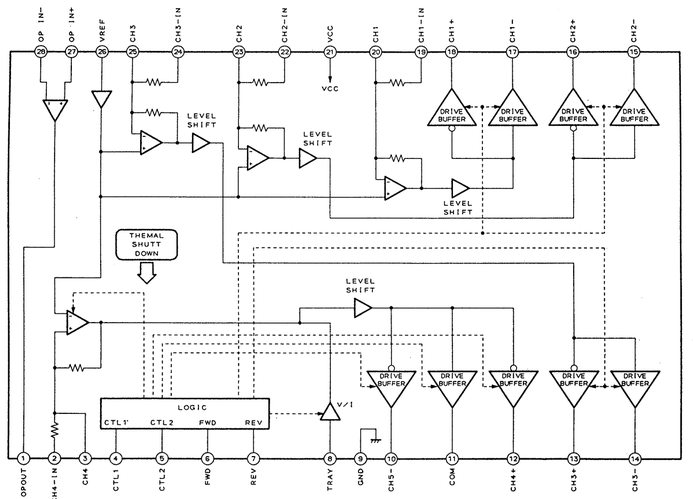
IC1 CXD2507AQ



IC2 CXA1782BQ



IC3 BA6796FP-T1

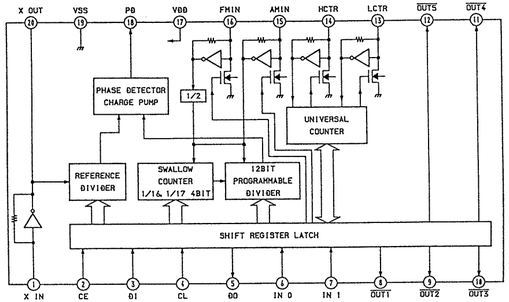


– 36 –

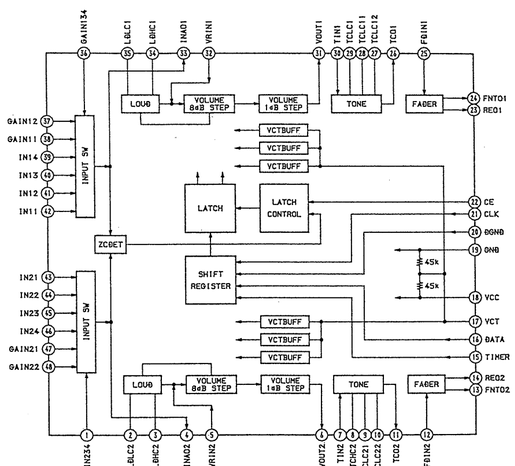
– 37 –

– MAIN SECTION –

IC3 LC7216M

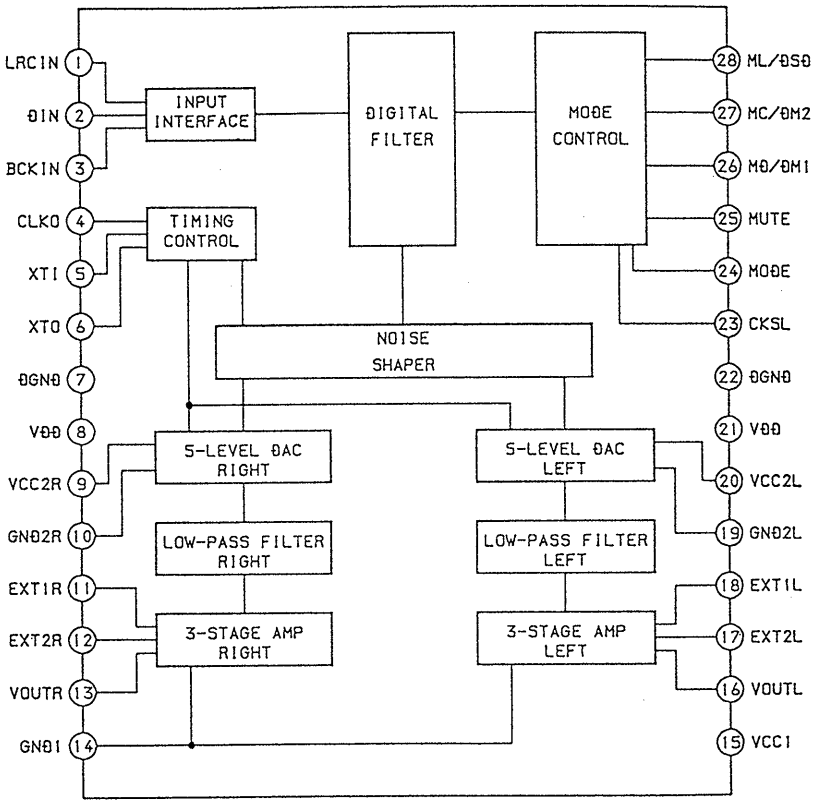


IC301 CXA1946AQ-T6

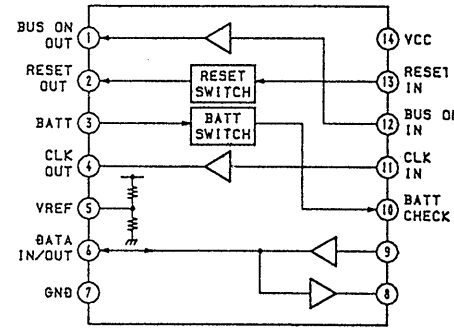


– 38 –

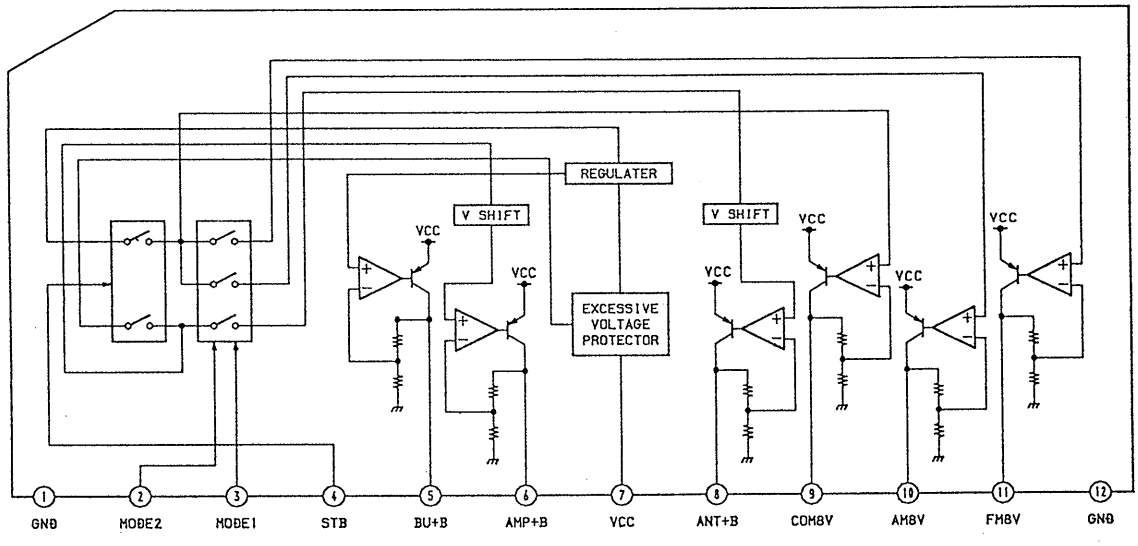
IC401 PCM1712U



IC751 MM1175XF-T1



IC901 BA3918-V2



5-7. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC601 MN1883220S4B1 (TUNER CONTROLLER)

Pin No.	Pin Name	I/O	Function
1 – 6	A5 – A0	O	Address signal output to the external RAM device Not used (open)
7	VDD	–	Power supply terminal (+5V)
8	OSC IN	I	Main system clock input terminal (8MHz)
9	OSC OUT	O	Main system clock output terminal (8MHz)
10	GND	–	Ground terminal
11	XT IN	I	Sub system clock input terminal Not used (fixed at "L")
12	XT OUT	O	Sub system clock output terminal Not used (open)
13	EX2	I	External clock signal input terminal Not used (fixed at "L")
14	$\overline{\text{RESET}}$	I	System reset signal input from system controller (IC701) reset: "L"
15	RDSCKI	I	Serial clock signal input terminal Not used (fixed at "L")
16	BU IN	I	BATT voltage level detect signal input from bus interface (IC751) (for SONY BUS)
17	$\overline{\text{BUS ON}}$	I	Bus on control signal input from system controller (IC701) (for SONY BUS)
18 – 25	D7 – D0	I/O	External RAM device data bus Not used (open)
26	RE	O	Read enable signal output to external RAM device Not used (open)
27	WE	O	Write enable signal output to external RAM device Not used (open)
28, 29	NCO	–	Not used (open)
30	RDSSI	I	Serial data input terminal Not used (fixed at "L")
31	NIL	I	Not used (fixed at "L")
32	AM STIN	I	Not used (open)
33 – 35	NCO	–	Not used (open)
36, 37	NIL	–	Not used (fixed at "L")
38	PLLSI	I	PLL serial data input from FM/AM PLL (IC3)
39	PLLSO	O	PLL serial data output to FM/AM PLL (IC3)
40	PLLCKO	O	PLL serial clock signal output to FM/AM PLL (IC3)
41	PLLCE	O	PLL serial chip enable signal output to FM/AM PLL (IC3)
42	UNIREQ	O	Bus request signal output to bus interface (IC751) (for SONY BUS)
43	LNKOFF	O	Link off signal output to bus interface (IC751) (for SONY BUS)
44	UNICKO	O	Serial clock signal output to bus interface (IC751) (for SONY BUS)
45	UNISI	I	Serial data input from bus interface (IC751) (for SONY BUS)
46	UNISO	O	Serial data output to bus interface (IC751) (for SONY BUS)
47	VDD	–	Power supply terminal (+5V)
48	AVDD	–	Power supply terminal (+5V)
49	AVREF	I	Reference voltage input terminal (+5V)
50, 51	NIL	–	Not used (fixed at "L")
52	SRAMRST	I	Reset signal input of the internal static RAM
53	MUTSEL	I	Muting selection signal input terminal (fixed at "H")
54	DSTSEL1	I	Destination setting terminal (fixed at "L": US model, fixed at "H": E model)
55	DSTSEL0	I	Destination setting terminal (fixed at "H")
56	AM VSM	I	AM signal meter voltage detection input terminal
57	FM VSM	I	FM signal meter voltage detection input terminal
58	AVREF	I	Reference ground terminal
59	AVSS	–	Ground terminal
60	GND	–	Ground terminal
61	TU ON	O	Tuner power supply on/off control output to regulator (IC901) "H": tuner on

Pin No.	Pin Name	I/O	Function
62	$\overline{DX}$/LO	O	Local/DX selection signal output terminal Not used (fixed at "L")
63	SEKOUT	O	Seek signal output to tuner unit (TU1) Output level "L" when change the frequency
64	AM ON	O	AM on/off control signal output terminal Not used (fixed at "L")
65	FM ON	O	FM power supply on/off control output to regulator (IC901) "H": FM on
66	TUNMUT	O	Audio mute signal output terminal
67	AF SEEK	O	AF seek control signal output terminal Not used (fixed at "L")
68	SRAM	O	Chip select signal output to the external RAM device Not used (fixed at "L")
69	A15	O	Address signal output to the external RAM device Not used (open)
70	ST IN	I	Stereo detection signal input from tuner unit (TU1)
71	SD IN	I	Station detection signal input from tuner unit (TU1)
72, 73	A14, A13	O	Address signal output to the external RAM device Not used (open)
74	CE	O	Chip enable signal output to the external RAM device Not used (open)
75 – 80	A11 – A6	O	Address signal output to the external RAM device Not used (open)

• MAIN BOARD IC701 μPD78058GC-199-3B9 (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Function
1, 2	NCO	–	Not used (open)
3	H12/24	I	12-hour/24-hour selection of the display indication 12-hour: "L", 24-hour: "H" (fixed at "L")
4	AVSS	–	Ground terminal
5	TIMPOL	I	Not used (fixed at "L")
6	DSPSEL	I	Not used (fixed at "H")
7	AVREF	I	Reference voltage input terminal (+5V)
8	SQ SI	I	Sub-code Q data signal input from CXD2507AQ (IC1)
9	EQSEL	I	Not used (fixed at "H")
10	SQ CKO	O	Sub-code Q data reading clock signal output to CXD2507AQ (IC1)
11	NIL	–	Not used (fixed at "L")
12	LCDSO	O	Serial data output to LCD driver (IC801)
13	LCDCKO	O	Serial clock output to LCD driver (IC801)
14	LCDCE	O	Chip enable output to LCD driver (IC801)
15	NCO	–	Not used (open)
16	UNISI	I	Serial data input from bus interface (IC751) (for SONY BUS)
17	UNISO	O	Serial data output to bus interface (IC751) (for SONY BUS)
18	UNICKI	I	Serial clock signal input from the pin ⑲ (UNICKO) (for SONY BUS)
19	UNICKO	O	Serial clock signal output to bus interface (IC751) (for SONY BUS)
20	BUSON	O	Bus on control signal output to bus interface (IC751), and tuner controller (IC601) (for SONY BUS)
21	DIMMER	O	Brightness control signal output of the LCD display
22	NCO	–	Not used (open)
23	ILLON	O	Illumination power supply control signal output terminal
24	CDMON	O	Mechanism deck section power supply on/off control signal output terminal power on: "H"
25	CD ON	O	CD servo circuit and digital signal processor circuit power supply on/off control signal output terminal power on: "H"
26	COLOR	O	Illumination color select signal output terminal Not used
27	PW ON	O	System power supply on/off control signal output terminal power on: "H"
28	SYS	O	System reset signal output terminal reset: "L"
29	VOLSO	O	Serial data output to electrical volume (IC301)
30	VOLCKO	O	Serial clock output to electrical volume (IC301)
31	VOLCE	O	Chip enable output to electrical volume (IC301)
32	TSTIN0	I	Test mode setting terminal Normally fixed at "H"
33	VSS	–	Ground terminal
34	ACC IN	I	Accessory voltage detection input terminal
35	TV SEL	I	Valid/invalid selection of the TV (fixed at "H")
36	TBTGSEL	I	CD tracking balance and tracking gain automatic adjustment select terminal
37	TEST	I/O	Test mode direct setting terminal Normally fixed at "H"
38	PW SEL	I	Power select switch (SW701) input terminal "H": on, "L": off
39	NOSESW	I	Detects the removal of the attaching and removing type front panel block Removing: "L"
40	A MUTE	O	Audio muting signal output terminal "H": mute on
41	AMPMUTE	O	Muting signal output to power amplifier (IC304) "L": mute on
42	AD ON	O	VREF control output terminal of A/D conversion "L": on

Pin No.	Pin Name	I/O	Function
43	$\overline{\text{LD ON}}$	O	Laser diode on/off selection signal output terminal "L": on
44	EMPH O	O	Emphasis control signal output to D/A converter (IC401)
45	$\overline{\text{L SW}}$	I	Sled limit in switch (SW3) detection input terminal The optical pick-up is inner position when "L"
46	BEEP	O	Beep sound output terminal
47	CD LAT	O	Data latch pulse signal output to CXD2507AQ (IC1)
48	CD SO	O	Data signal output to CXD2507AQ (IC1)
49	CD CKO	O	Data clock signal output to CXD2507AQ (IC1)
50	$\overline{\text{CD RST}}$	O	Reset signal output to CXD2507AQ (IC1) and CXA1782BQ (IC2) "L": reset
51	F OK	I	Focus OK monitor signal input from CXD2507AQ (IC1) and CXA1782BQ (IC2) "H": OK, "L": NG
52	8CM	I	Mechanism deck is for the 12cm disc only or not "L": 12cm disc only, "H": 8cm and 12cm disc compatible (fixed at "L")
53	GFS	I	Guard frame sync lock state input from CXD2507AQ (IC1) The playback EFM frame sync and interpolation protection timing match when "H"
54	$\overline{\text{IN SW}}$	I	Disc in detect switch (SW1) detection input terminal The disc is loaded when "L"
55	CTL1	O	Control signal output to BA6796FP (IC3)
56	CTL2	O	Control signal output to BA6796FP (IC3)
57	$\overline{\text{D SW}}$	I	Down switch (SW3) detection input terminal Detects the completion of the disc chucking operation
58	LM EJ	O	Loading motor (M903) control output to BA6796FP (IC3) *1
59	LM LOD	O	Loading motor (M903) control output to BA6796FP (IC3) *1
60	$\overline{\text{RESET}}$	I	System reset signal input from IC902 and SW901 (reset switch) "L": reset
61	SIRCS	I	Remote control signal input from remote control receiver (IC802)
62	BU IN	I	BATT voltage level detect signal input from bus interface (IC751) (for SONY BUS)
63	KEYACK	I	Key input acknowledge (connected to voltage reference line)
64	$\overline{\text{SELF SW}}$	I	Self switch (SW2) detection input terminal The disc in/out operation when "L"
65	SCOR	I	Sub-code sync (S0+S1) detection signal input from CXD2507AQ (IC1)
66	CNIN	I	Numbers of track counted signal input from CXA1782BQ (IC2)
67	$\overline{\text{SENS}}$	I	Internal status (SENSE) signal input from CXD2507AQ (IC1)
68	VDD	–	Power supply terminal (+5V)
69	X OUT	O	Main system clock output terminal (5MHz)
70	X IN	I	Main system clock input terminal (5MHz)
71	GND	–	Ground terminal
72	XT OUT	O	Sub system clock output terminal (32.768kHz)
73	XT IN	I	Sub system clock input terminal (32.768kHz)
74	AVDD	–	Power supply terminal (+5V)
75	AVREF	I	Reference voltage input terminal (+5V)
76	KEYIN0	I	Key input terminal (A/D input)
77	KEYIN1	I	Key input terminal (A/D input)
78	RC IN0	I	Rotary remote commander shift key input terminal
79	RC IN1	I	Rotary remote commander shift key input terminal
80	NIL	–	Not used (fixed at "L")

*1 Loading motor control

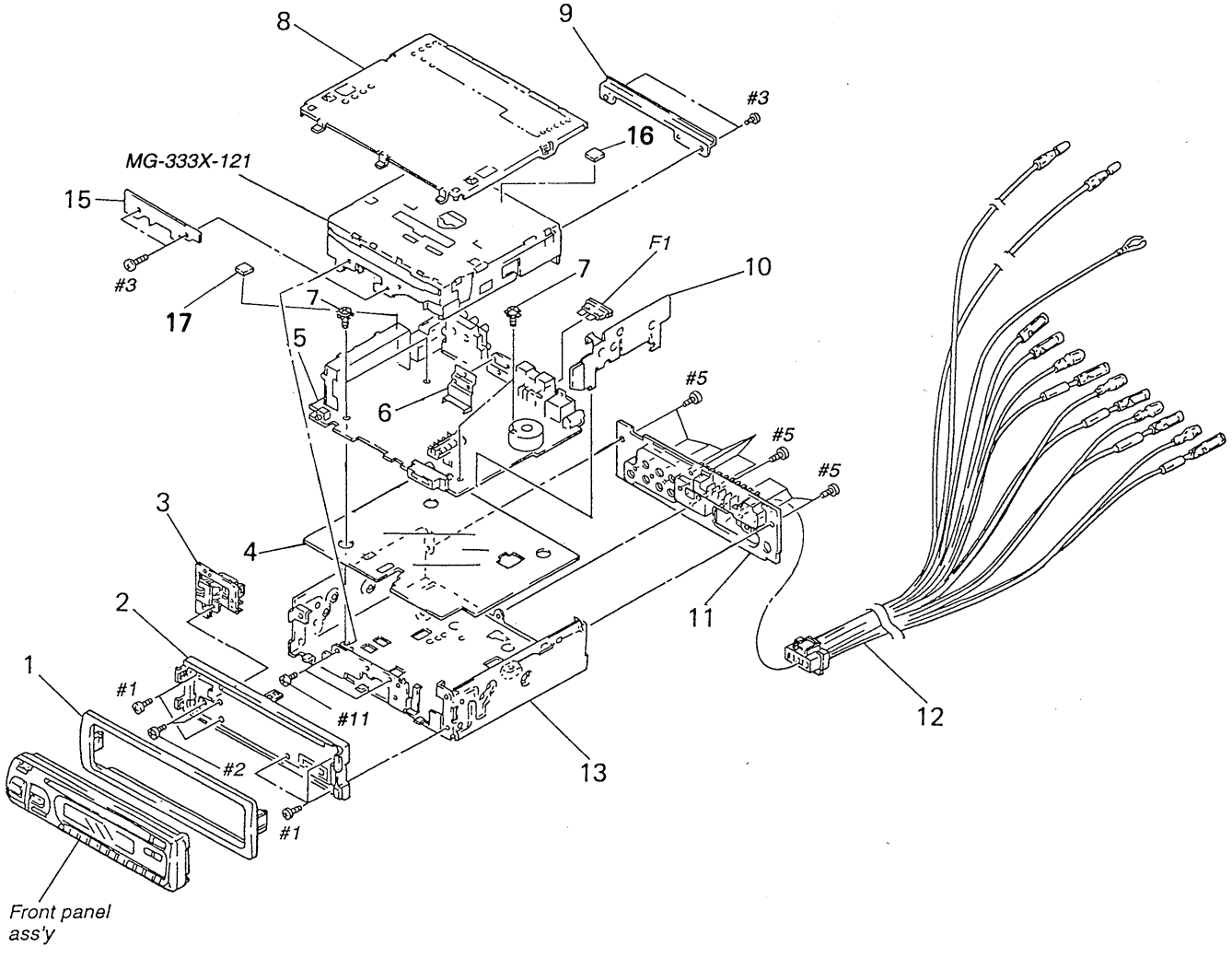
	STOP	LOADING	EJECT	BRAKE
LM EJ (pin ⑱)	"L"	"L"	"H"	"H"
LM LOD (pin ⑲)	"L"	"H"	"L"	"H"

SECTION 6
EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some diffrebce from the orginal one.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrcal parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only wiyh part number specified.

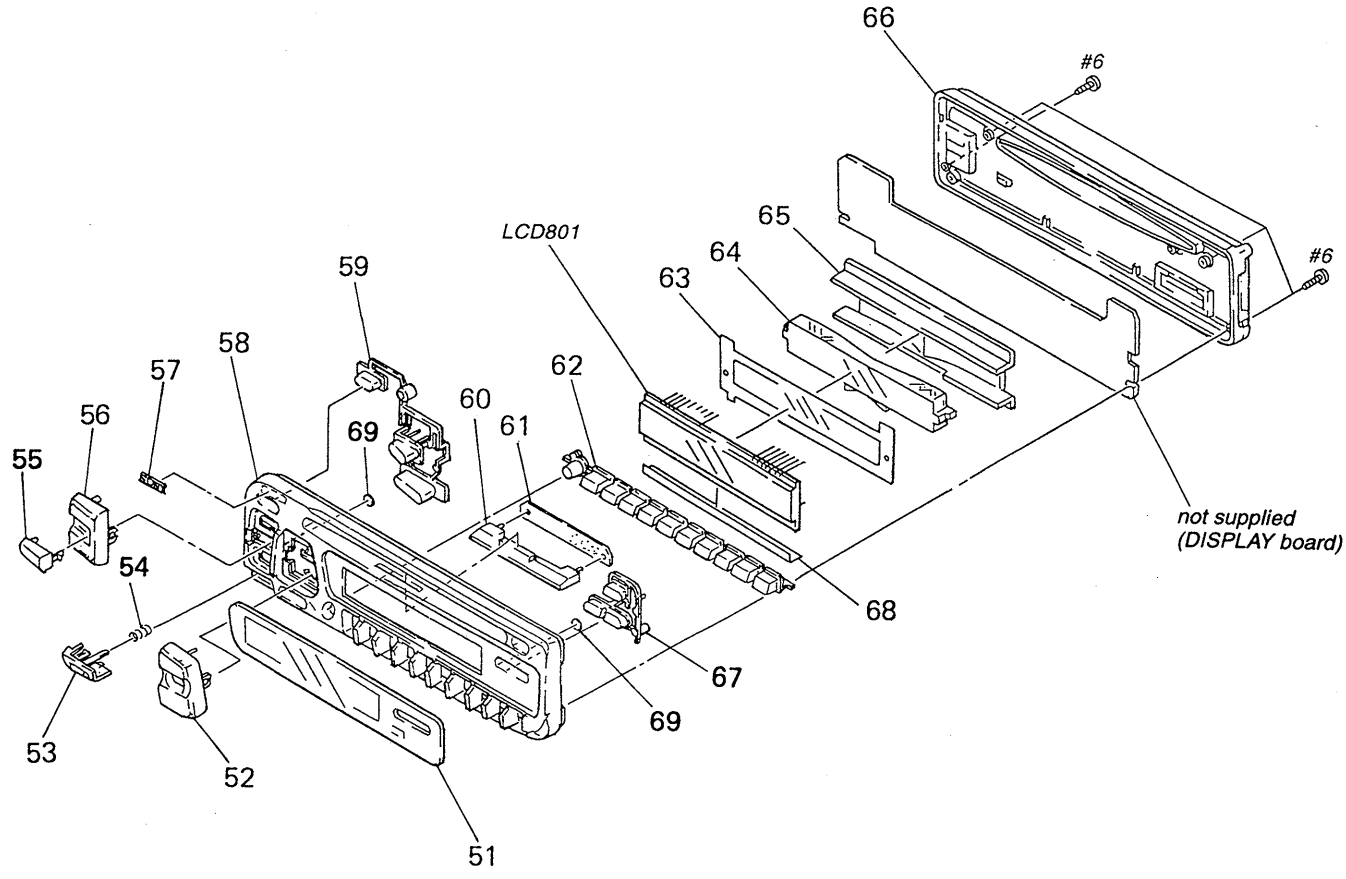
(1) GENERAL SECTION



Ref. No.	Part No.	Description	Remark
1	3-932-910-01	COLLAR (E)	
1	3-932-910-11	COLLAR (US)	
2	X-3371-627-1	PANEL (SUB) ASSY (E)	
2	X-3371-628-1	PANEL (SUB) ASSY (US)	
3	X-3367-636-1	LOCK ASSY	
* 4	3-932-908-01	SHEET, INSULATING	
* 5	A-3294-067-A	MAIN BOARD, COMPLETE (E)	
* 5	A-3309-214-A	MAIN BOARD, COMPLETE (US)	
* 6	3-932-893-01	BRACKET (IC)	
7	3-915-923-01	SCREW, GROUND POINT	

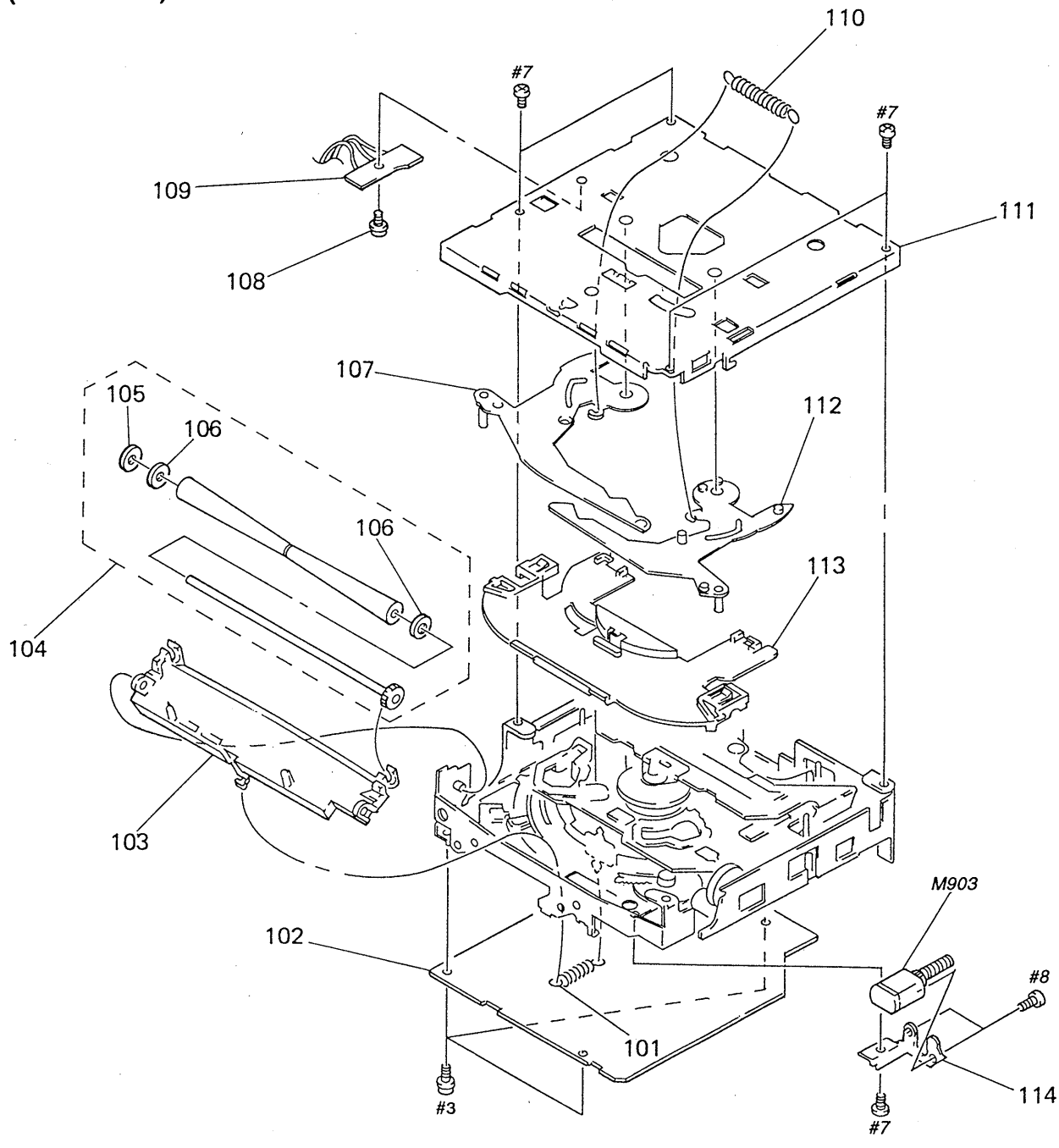
Ref. No.	Part No.	Description	Remark
* 8	X-3371-629-1	COVER ASSY	
* 9	3-932-894-01	BRACKET (MD)	
* 10	3-932-909-01	SINK (IC), HEAT	
* 11	3-932-896-01	SINK, HEAT	
12	1-776-207-31	CORD (WITH CONNECTOR) (POWER)	
* 13	3-932-907-01	CHASSIS	
15	3-935-079-01	BRACKET (MD), FRONT	
16	2-389-320-01	RUBBER (A)	
17	3-924-145-01	CUSHION (TU), RUBBER	
F1	1-532-982-11	FUSE (BRADE TYPE) (AUTO FUSE) (15A)	

(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	X-3372-251-1	WINDOW ASSY	
52	3-932-902-01	BUTTON (+. -)	
53	3-932-905-01	BUTTON (RELEASE)	
54	3-914-590-01	SPRING (R2)	
55	3-932-901-01	BUTTON (SOURCE)	
56	3-932-900-01	BUTTON (SEEK) (+. ⏭. ⏩. ⏮. ⏪. -)	
57	3-904-194-01	EMBLEM (NO. 2.5), SONY	
58	3-932-904-71	PANEL, FRONT	
59	3-932-903-01	BUTTON (SOUND) (OFF. SOUND. MUTE)	
60	3-932-889-01	PLATE (F), LIGHT GUIDE	
61	3-932-898-01	SHEET (F)	
62	3-932-892-01	BUTTON (10 KEY) (●. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10)	
* 63	3-932-890-01	SHEET, DIFFUSION	
* 64	3-932-888-01	PLATE (LCD), LIGHT GUIDE	
* 65	3-932-887-01	HOLDER (LCD)	
66	3-932-899-01	PANEL, BACK	
67	3-932-897-01	BUTTON (EJECT) (⏏ DSPL. LIST)	
68	3-935-366-01	SHEET (ELECTROSTATIC)	
* 69	3-917-074-22	SPACER (RING)	
LCD801	1-801-239-11	DISPLAY PANEL, LIQUID CRYSTAL	

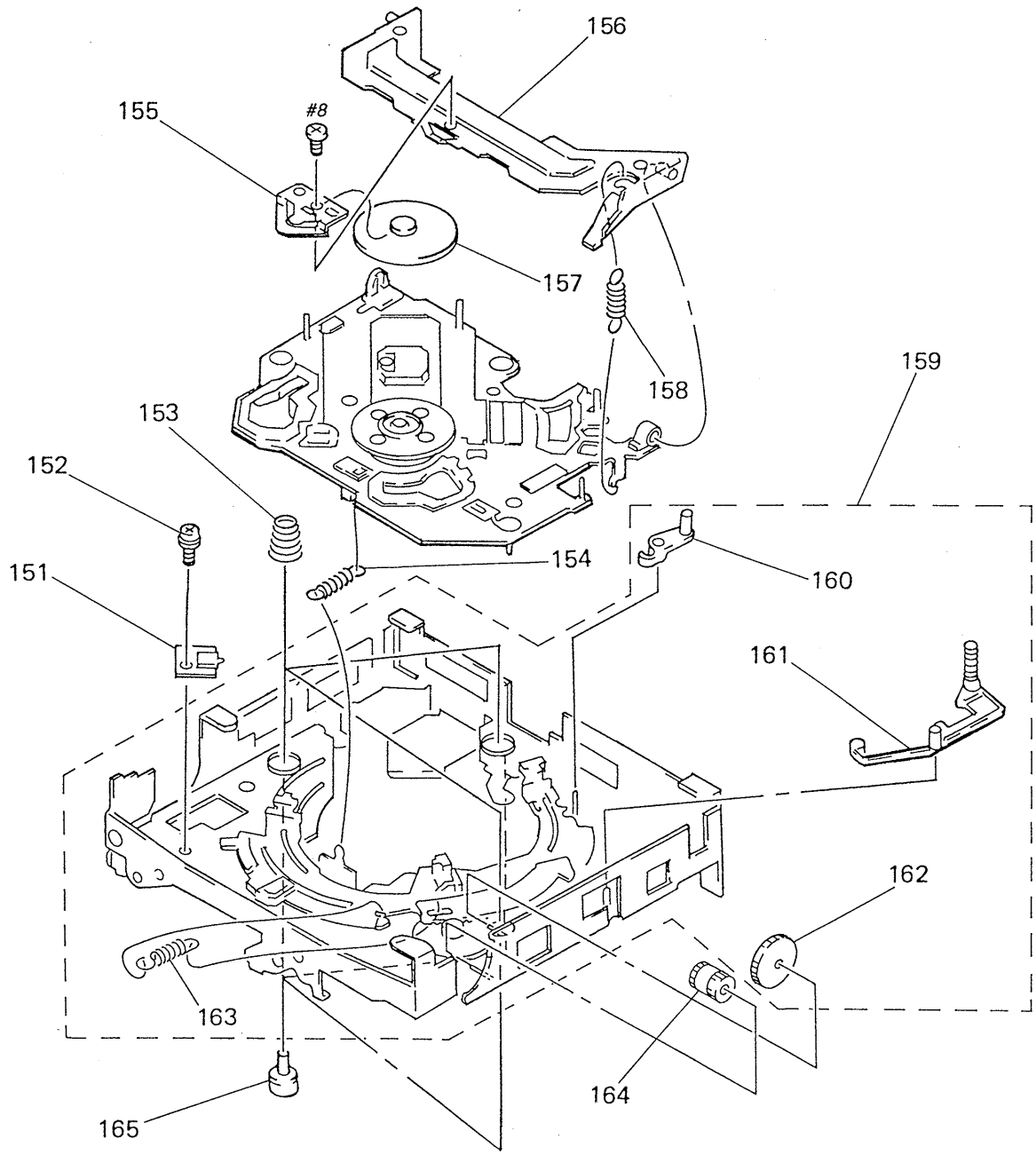
(3) MECHANISM DECK SECTION-1 (MG-333X-121)



Ref. No.	Part No.	Description	Remark
101	3-931-916-01	SPRING (RA), TENSION	
* 102	A-3309-021-A	SERVO BOARD, COMPLETE	
103	3-931-902-01	ARM (ROLLER)	
104	A-3291-567-A	ROLLER ASSY	
105	3-701-439-11	WASHER	
* 106	3-322-413-01	SPACER, INSULATING	
* 107	X-3371-501-1	LEVER (L) ASSY	
108	3-338-737-01	SCREW (2X3), +PS	

Ref. No.	Part No.	Description	Remark
* 109	1-659-836-11	DISC IN SW BOARD	
110	3-931-909-02	SPRING (LR), TENSION	
* 111	3-931-903-01	CHASSIS (T)	
* 112	X-3371-502-1	LEVER (R) ASSY	
* 113	3-931-908-02	GUIDE (DISC)	
* 114	3-931-899-01	BRACKET (MOTOR)	
M903	A-3291-576-A	MOTOR SUB ASSY, LO (LOADING)	

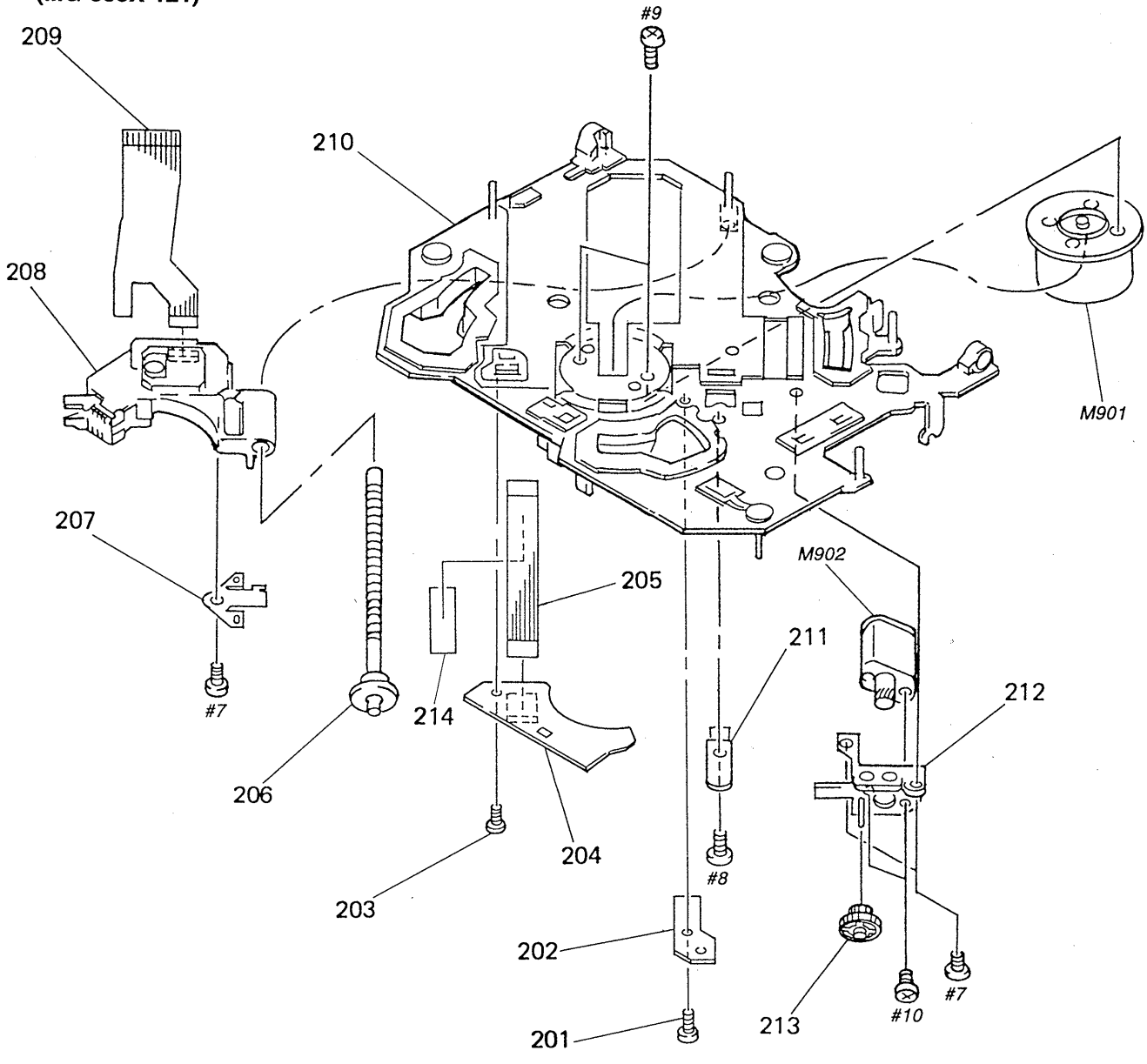
(4) MECHANISM DECK SECTION-2 (MG-333X-121)



Ref. No.	Part No.	Description	Remark
* 151	1-659-837-11	LOAD SW BOARD	
152	3-338-737-01	SCREW (2X3), +PS	
153	3-931-898-01	SPRING (FL), COMPRESSION	
154	3-931-914-01	SPRING (ANGLE), TENSION	
155	3-931-894-01	BRACKET (CP)	
156	3-931-893-01	ARM, CHUCKING	
* 157	3-384-918-01	RETAINER (DISC)	
158	3-931-895-01	SPRING (CH), TENSION	

Ref. No.	Part No.	Description	Remark
159	A-3291-568-A	CHASSIS (M) ASSY BOARD, COMPLETE	
160	3-931-881-01	LEVER (LOCK)	
161	3-931-879-02	LEVER (D)	
162	3-931-882-02	GEAR (MDL)	
163	3-931-883-01	SPRING (TR), TENSION	
164	3-934-879-01	WHEEL (U), WORM	
165	3-931-897-01	DAMPER (T)	

(5) MECHANISM DECK SECTION-3
(MG-333X-121)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only wiyh part number specified.

Ref. No.	Part No.	Description	Remark
201	3-338-737-01	SCREW (2X3), +PS	
* 202	1-659-835-12	LIMIT SW BOARD	
203	3-909-607-01	SCREW	
* 204	1-659-834-11	SUB BOARD	
205	1-659-880-11	MOTOR FLEXIBLE BOARD	
206	A-3291-571-A	SHAFT (FEED) ASSY	
207	3-931-834-01	SPRING (FEED), PLATE	
⚠208	8-848-402-02	OPTICAL PICK-UP KSS-520A	
209	1-659-881-11	PICK-UP FLEXIBLE BOARD	
* 210	X-3371-503-1	CHASSIS (OP) (O/S) ASSY	
211	3-931-829-01	SPRING (SL), PLATE	
212	X-3371-504-1	BASE (DRIVING) ASSY	
213	3-931-832-01	GEAR (SL MIDWAY)	
214	3-831-444-11	CUSHION (B)	
M901	X-3371-664-1	MOTOR ASSY (SPINDLE)	
M902	A-3291-574-A	MOTOR ASSY, SLED	

SECTION 7
ELECTRICAL PARTS LIST

DISC IN SW **DISPLAY**

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA ..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref.No.	Part No.	Description			Remark
*	1-659-836-11	DISC IN SW BOARD			
		**********			
		< SWITCH >			
SW1	1-572-288-11	SWITCH, PUSH (DISC IN)			
SW2	1-572-288-11	SWITCH, PUSH (SELF)			
**********					
		DISPLAY BOARD			
		**********			
		< CAPACITOR >			
C801	1-163-037-11	CERAMIC CHIP	0.022uF	10% 25V	
C802	1-164-489-11	CERAMIC CHIP	0.22uF	10% 16V	
C804	1-163-251-11	CERAMIC CHIP	100PF	5% 50V	
C847	1-165-128-11	CERAMIC CHIP	0.22uF	16V	
		< CONNECTOR >			
CNP801	1-764-423-11	PIN, CONNECTOR 12P			
		< DIODE >			
D801	8-719-404-46	DIODE	MA110		
D802	8-719-977-12	DIODE	DTZ6.8B		
D803	8-719-977-12	DIODE	DTZ6.8B		
D804	8-719-977-12	DIODE	DTZ6.8B		
D806	8-719-422-43	DIODE	MA8051-H		
D807	8-719-422-41	DIODE	MA8051-L-TX		
		< IC >			
IC801	8-759-365-90	IC	LC75824W		
IC802	8-749-012-17	IC	RS-140-T		
		< CHIP CONDUCTOR >			
JC801	1-216-295-00	CONDUCTOR, CHIP	(2012)		
JC802	1-216-295-00	CONDUCTOR, CHIP	(2012)		
		< LIQUID CRYSTAL DISPLAY >			
LCD801	1-801-239-11	DISPLAY PANEL, LIQUID CRYSTAL			

Ref.No.	Part No.	Description			Remark
		< SWITCH >			
LSW801	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (⏏)			
LSW802	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (LIST)			
LSW803	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (DSPL)			
LSW805	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (10)			
LSW806	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (9)			
LSW807	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (8)			
LSW808	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (7)			
LSW809	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (6)			
LSW810	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (5)			
LSW811	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (4)			
LSW812	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (3)			
LSW813	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (2)			
LSW814	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (1)			
LSW815	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (OFF)			
LSW816	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (SOURCE)			
LSW817	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (+ ⏭ ⏩)			
LSW818	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (- ⏮ ⏪)			
LSW819	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (SHIFT●)			
LSW820	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (MUTE)			
LSW821	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (SOUND)			
LSW822	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (+)			
LSW823	1-762-619-11	SWITCH, KEY BOARD (WITH LED) (-)			
		< PILOT LAMP >			
PL803	1-517-533-21	LAMP, PILOT (GREEN)			
PL804	1-517-533-21	LAMP, PILOT (GREEN)			
		< RESISTOR >			
R801	1-219-286-11	METAL GLAZE	680	2% 1/16W	
R802	1-219-286-11	METAL GLAZE	680	2% 1/16W	
R803	1-219-286-11	METAL GLAZE	680	2% 1/16W	
R804	1-218-838-11	METAL GLAZE	1K	2% 1/16W	
R805	1-208-687-11	METAL GLAZE	1.5K	2% 1/16W	
R806	1-208-687-11	METAL GLAZE	1.5K	2% 1/16W	
R807	1-208-691-11	METAL GLAZE	2.2K	2% 1/16W	
R808	1-208-695-11	METAL GLAZE	3.3K	2% 1/16W	
R809	1-208-699-11	METAL GLAZE	4.7K	2% 1/16W	
R810	1-208-703-11	METAL GLAZE	6.8K	2% 1/16W	

DISPLAY **LIMIT SW** **LOAD SW** **MAIN**

Ref. No.	Part No.	Description			Remark
R811	1-208-707-11	METAL GLAZE	10K	2%	1/16W
R812	1-208-711-11	METAL GLAZE	15K	2%	1/16W
R813	1-208-715-11	METAL GLAZE	22K	2%	1/16W
R814	1-219-286-11	METAL GLAZE	680	2%	1/16W
R815	1-219-286-11	METAL GLAZE	680	2%	1/16W
R816	1-219-286-11	METAL GLAZE	680	2%	1/16W
R817	1-218-838-11	METAL GLAZE	1K	2%	1/16W
R818	1-208-687-11	METAL GLAZE	1.5K	2%	1/16W
R819	1-208-687-11	METAL GLAZE	1.5K	2%	1/16W
R820	1-208-691-11	METAL GLAZE	2.2K	2%	1/16W
R821	1-208-695-11	METAL GLAZE	3.3K	2%	1/16W
R823	1-216-186-00	METAL GLAZE	330	5%	1/8W
R827	1-216-025-00	METAL GLAZE	100	5%	1/10W
R829	1-216-025-00	METAL GLAZE	100	5%	1/10W
R831	1-216-033-00	METAL CHIP	220	5%	1/10W
R833	1-216-033-00	METAL CHIP	220	5%	1/10W
R835	1-216-033-00	METAL CHIP	220	5%	1/10W
R838	1-216-809-11	METAL CHIP	100	5%	1/16W
R839	1-216-041-00	METAL CHIP	470	5%	1/10W
R840	1-216-041-00	METAL CHIP	470	5%	1/10W
R841	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R842	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R843	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R844	1-216-821-11	METAL CHIP	1K	5%	1/16W
R845	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R846	1-216-821-11	METAL CHIP	1K	5%	1/16W
R847	1-216-853-11	METAL CHIP	470K	5%	1/16W
R848	1-216-857-11	METAL CHIP	1M	5%	1/16W
R851	1-216-033-00	METAL CHIP	220	5%	1/10W

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* 1-659-835-12 LIMIT SW BOARD

****

< SWITCH >

SW3 1-572-688-11 SWITCH, PUSH (1 KEY) (LIMIT)

****

* 1-659-837-11 LOAD SW BOARD

****

< SWITCH >

SW4 1-572-288-11 SWITCH, PUSH (DOWN)

****

* A-3309-214-A MAIN BOARD, COMPLETE (US)
* A-3294-067-A MAIN BOARD, COMPLETE (E)

****

* 3-932-893-01 BRACKET (IC) (E)
* 3-932-909-01 SINK (IC), HEAT (E)

Ref. No.	Part No.	Description			Remark
		< CAPACITOR >			
C1	1-164-343-11	CERAMIC CHIP	0.056uF	10%	25V (US)
C1	1-164-344-11	CERAMIC CHIP	0.068uF	10%	25V (E)
C2	1-163-986-00	CERAMIC CHIP	0.027uF	10%	25V (US)
C2	1-163-024-00	CERAMIC CHIP	0.018uF	5%	50V (E)
C3	1-163-986-00	CERAMIC CHIP	0.027uF	10%	25V (US)
C3	1-163-024-00	CERAMIC CHIP	0.018uF	5%	50V (E)
C4	1-124-589-11	ELECT	47uF	20%	16V
C5	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C6	1-136-169-00	FILM	0.22uF	5%	50V
C7	1-104-683-11	MYLAR	0.0047uF	5%	50V
C8	1-216-295-00	CONDUCTOR CHIP	(2012)		
C01	1-165-128-11	CERAMIC CHIP	0.022uF		16V
C02	1-165-128-11	CERAMIC CHIP	0.022uF		16V
C03	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C04	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C05	1-162-209-31	CERAMIC	27PF	5%	50V
C12	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C13	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C14	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C15	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C16	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C17	1-124-589-11	ELECT	47uF	20%	16V
C18	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C19	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C20	1-126-933-11	ELECT	100uF	20%	10V
C21	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C22	1-126-933-11	ELECT	100uF	20%	10V
C23	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C24	1-126-933-11	ELECT	100uF	20%	10V
C25	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C27	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C28	1-124-589-11	ELECT	47uF	20%	16V
C32	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C33	1-124-455-00	ELECT	100uF	20%	16V
C37	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C81	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C101	1-124-257-00	ELECT	2.2uF	20%	50V
C102	1-124-257-00	ELECT	2.2uF	20%	50V
C103	1-104-329-11	CERAMIC CHIP	0.1uF	10%	50V
C104	1-163-063-00	CERAMIC CHIP	0.022uF	10%	50V
C106	1-124-257-00	ELECT	2.2uF	20%	50V
C107	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C108	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C109	1-104-946-11	ELECT	10uF	20%	35V
C110	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C111	1-104-946-11	ELECT	10uF	20%	35V
C112	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V

Ref. No.	Part No.	Description			Remark
C113	1-126-163-11	ELECT	4. 7uF	20%	50V
C114	1-126-163-11	ELECT	4. 7uF	20%	50V
C122	1-124-257-00	ELECT	2. 2uF	20%	50V
C123	1-124-257-00	ELECT	2. 2uF	20%	50V
C124	1-163-009-11	CERAMIC CHIP	0. 001uF	10%	50V
C125	1-163-009-11	CERAMIC CHIP	0. 001uF	10%	50V
C126	1-136-165-00	FILM	0. 1uF	5%	50V
C127	1-136-165-00	FILM	0. 1uF	5%	50V
C128	1-136-165-00	FILM	0. 1uF	5%	50V
C129	1-136-165-00	FILM	0. 1uF	5%	50V
C130	1-163-009-11	CERAMIC CHIP	0. 001uF	10%	50V
C131	1-163-009-11	CERAMIC CHIP	0. 001uF	10%	50V
C132	1-163-009-11	CERAMIC CHIP	0. 001uF	10%	50V
C161	1-126-301-11	ELECT	1uF	20%	50V
C162	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C201	1-124-257-00	ELECT	2. 2uF	20%	50V
C202	1-124-257-00	ELECT	2. 2uF	20%	50V
C203	1-104-329-11	CERAMIC CHIP	0. 1uF	10%	50V
C204	1-163-063-00	CERAMIC CHIP	0. 022uF	10%	50V
C206	1-124-257-00	ELECT	2. 2uF	20%	50V
C207	1-163-809-11	CERAMIC CHIP	0. 047uF	10%	25V
C208	1-163-017-00	CERAMIC CHIP	0. 0047uF	5%	50V
C209	1-104-946-11	ELECT	10uF	20%	35V
C210	1-163-017-00	CERAMIC CHIP	0. 0047uF	5%	50V
C211	1-104-946-11	ELECT	10uF	20%	35V
C212	1-164-489-11	CERAMIC CHIP	0. 22uF	10%	16V
C213	1-126-163-11	ELECT	4. 7uF	20%	50V
C214	1-126-163-11	ELECT	4. 7uF	20%	50V
C222	1-124-257-00	ELECT	2. 2uF	20%	50V
C223	1-124-257-00	ELECT	2. 2uF	20%	50V
C224	1-163-009-11	CERAMIC CHIP	0. 001uF	10%	50V
C225	1-163-009-11	CERAMIC CHIP	0. 001uF	10%	50V
C226	1-136-165-00	FILM	0. 1uF	5%	50V
C227	1-136-165-00	FILM	0. 1uF	5%	50V
C228	1-136-165-00	FILM	0. 1uF	5%	50V
C229	1-136-165-00	FILM	0. 1uF	5%	50V
C230	1-163-009-11	CERAMIC CHIP	0. 001uF	10%	50V
C231	1-163-009-11	CERAMIC CHIP	0. 001uF	10%	50V
C232	1-163-009-11	CERAMIC CHIP	0. 001uF	10%	50V
C261	1-126-301-11	ELECT	1uF	20%	50V
C262	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C300	1-126-163-11	ELECT	4. 7uF	20%	50V
C301	1-163-009-11	CERAMIC CHIP	0. 001uF	10%	50V
C302	1-163-809-11	CERAMIC CHIP	0. 047uF	10%	25V
C303	1-124-455-00	ELECT	100uF	20%	16V
C304	1-163-809-11	CERAMIC CHIP	0. 047uF	10%	25V
C305	1-124-455-00	ELECT	100uF	20%	16V
C306	1-124-234-00	ELECT	22uF	20%	16V

Ref. No.	Part No.	Description			Remark
C307	1-164-346-11	CERAMIC CHIP	1uF		16V
C311	1-163-002-11	CERAMIC CHIP	270PF	10%	50V
C312	1-126-163-11	ELECT	4. 7uF	20%	50V
C313	1-124-234-00	ELECT	22uF	20%	16V
C315	1-163-037-11	CERAMIC CHIP	0. 022uF	10%	25V
C318	1-164-232-11	CERAMIC CHIP	0. 01uF		50V
C321	1-164-232-11	CERAMIC CHIP	0. 01uF		50V
C322	1-164-232-11	CERAMIC CHIP	0. 01uF		50V
C324	1-115-469-21	ELECT	4700uF		16V
C325	1-164-232-11	CERAMIC CHIP	0. 01uF		50V
C328	1-163-038-00	CERAMIC CHIP	0. 1uF		25V
C329	1-163-038-00	CERAMIC CHIP	0. 1uF		25V
C330	1-163-038-00	CERAMIC CHIP	0. 1uF		25V
C402	1-124-234-00	ELECT	22uF	20%	16V
C404	1-124-234-00	ELECT	22uF	20%	16V
C405	1-163-038-00	CERAMIC CHIP	0. 1uF		25V
C406	1-163-038-00	CERAMIC CHIP	0. 1uF		25V
C407	1-163-038-00	CERAMIC CHIP	0. 1uF		25V
C408	1-163-038-00	CERAMIC CHIP	0. 1uF		25V
C409	1-124-257-00	ELECT	2. 2uF	20%	50V
C410	1-124-257-00	ELECT	2. 2uF	20%	50V
C411	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C412	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C413	1-163-038-00	CERAMIC CHIP	0. 1uF		25V
C414	1-163-215-00	CERAMIC CHIP	0. 0027uF	5%	50V
C415	1-163-193-00	CERAMIC CHIP	330PF	5%	50V
C416	1-163-215-00	CERAMIC CHIP	0. 0027uF	5%	50V
C417	1-163-193-00	CERAMIC CHIP	330PF	5%	50V
C418	1-163-077-00	CERAMIC CHIP	0. 1uF	10%	25V
C419	1-104-329-11	CERAMIC CHIP	0. 1uF	10%	50V
C420	1-104-946-11	ELECT	10uF	20%	35V
C451	1-163-009-11	CERAMIC CHIP	0. 001uF	10%	50V
C452	1-124-455-00	ELECT	100uF	20%	16V
C453	1-124-455-00	ELECT	100uF	20%	16V
C454	1-164-004-11	CERAMIC CHIP	0. 1uF	10%	25V
C455	1-164-505-11	CERAMIC CHIP	2. 2uF		16V
C456	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C601	1-163-038-00	CERAMIC CHIP	0. 1uF		25V
C602	1-163-038-00	CERAMIC CHIP	0. 1uF		25V
C603	1-163-038-00	CERAMIC CHIP	0. 1uF		25V
C604	1-163-037-11	CERAMIC CHIP	0. 022uF	10%	25V
C605	1-164-346-11	CERAMIC CHIP	1uF		16V
C606	1-163-038-00	CERAMIC CHIP	0. 1uF		25V
C607	1-126-154-11	ELECT	47uF	20%	6. 3V
C608	1-163-037-11	CERAMIC CHIP	0. 022uF	10%	25V
C652	1-164-161-11	CERAMIC CHIP	0. 0022uF	10%	100V
C701	1-163-038-00	CERAMIC CHIP	0. 1uF		25V
C702	1-163-038-00	CERAMIC CHIP	0. 1uF		25V
C703	1-126-154-11	ELECT	47uF	20%	6. 3V

MAIN

Ref. No.	Part No.	Description			Remark
C704	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C705	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C706	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C751	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C752	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C901	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C902	1-126-157-11	ELECT	10uF	20%	16V
C903	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C904	1-124-589-11	ELECT	47uF	20%	16V
C905	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C906	1-126-157-11	ELECT	10uF	20%	16V
C907	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C908	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C910	1-126-301-11	ELECT	1uF	20%	50V
C911	1-126-301-11	ELECT	1uF	20%	50V
C912	1-125-701-11	CAP, DOUBLE LAYER	0.047F		5.5V
C913	1-124-455-00	ELECT	100uF	20%	16V
C914	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C951	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C952	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
		< CONNECTOR/JACK >			
CNJ502	1-764-808-14	JACK (ANT) (ANT IN)			
CNJ901	1-566-822-41	JACK (REMOTE IN)			
CNP301	1-774-701-11	PIN, CONNECTOR 16P			
CNP302	1-774-700-11	JACK, PIN 6P (BUS AUDIO IN/LINE OUT)			
CNP504	1-764-617-12	PIN, CONNECTOR (PC BOARD) 30P			
CNP751	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)			
CNP901	1-764-422-11	PLUG, CONNECTOR 12P			
		< SPARK GAP CAPACITOR >			
CP81	1-519-504-11	GAP, DISCHARGE			
		< DIODE >			
D1	8-719-981-59	DIODE	FC805		
D2	8-719-422-94	DIODE	MA8091-L		
D3	8-719-977-03	DIODE	DTZ5.6B		
D05	8-719-035-76	DIODE	MA4068-(TA)		
D300	8-719-404-46	DIODE	MA110		
D301	8-719-421-24	DIODE	MA8039-H		
D302	8-719-421-24	DIODE	MA8039-H		
D310	8-719-049-38	DIODE	1N5404TU		
D451	8-719-422-94	DIODE	MA8091-L		
D452	8-719-422-49	DIODE	MA8056-L		
D601	8-719-050-86	DIODE	1SS133T-91S		
D701	8-719-404-46	DIODE	MA110		
D702	8-719-914-44	DIODE	DAP202K		
D751	8-719-404-46	DIODE	MA110		

Ref. No.	Part No.	Description		Remark
D752	8-719-422-64	DIODE	MA8062-M	
D753	8-719-422-64	DIODE	MA8062-M	
D754	8-719-017-62	DIODE	MA8068-L-TX	
D755	8-719-422-64	DIODE	MA8062-M	
D901	8-719-977-12	DIODE	DTZ6.8B	
D902	8-719-022-90	DIODE	MA8160M	
D903	8-719-017-98	DIODE	MA8200-TX	
D904	8-719-977-12	DIODE	DTZ6.8B	
D905	8-719-914-44	DIODE	DAP202K	
D906	8-719-977-12	DIODE	DTZ6.8B	
D907	8-719-109-97	DIODE	RD6.8ES-B2	
D908	8-719-977-12	DIODE	DTZ6.8B	
D909	8-719-109-97	DIODE	RD6.8ES-B2	
D910	8-719-977-12	DIODE	DTZ6.8B	
D911	8-719-109-97	DIODE	RD6.8ESB2	
D912	8-719-109-97	DIODE	RD6.8ES-B2	
D914	8-719-109-97	DIODE	RD6.8ES-B2	
D915	8-719-109-97	DIODE	RD6.8ES-B2	
D916	8-719-404-46	DIODE	MA110	
D917	8-719-053-18	DIODE	1SR154-400TE-25	
D918	8-719-053-18	DIODE	1SR154-400TE-25	
D925	8-719-404-46	DIODE	MA110	
D951	8-719-914-44	DIODE	DAP202K	
D952	8-719-423-10	DIODE	MA8100-M-TX	
D953	8-719-422-76	DIODE	MA8075-M	
D954	8-719-914-43	DIODE	DAN202K	
		< IC >		
IC3	8-759-823-81	IC	LC7216M	
IC101	8-759-711-82	IC	NJM4580E	
IC102	8-759-711-82	IC	NJM4580E	
IC301	8-752-075-48	IC	CXA1946AQ-T6	
IC304	8-759-369-41	IC	HA13155	
IC401	8-759-185-31	IC	PCM1712U	
IC402	8-759-711-82	IC	NJM4580E	
IC601	8-759-381-32	IC	MN1883220S4B1	
IC602	8-759-344-91	IC	RN5VD23AA-TL	
IC701	8-759-389-62	IC	uPD78058GC-199-3B9	
IC751	8-759-096-16	IC	MM1175XF-T1	
IC901	8-759-347-49	IC	BA3918-V2	
IC902	8-759-097-36	IC	RH5VA40AA	
		< CHIP CONDUCTOR >		
JC101	1-216-295-00	CONDUCTOR, CHIP		(2012)
JC102	1-216-295-00	CONDUCTOR, CHIP		(2012)
JC103	1-216-295-00	CONDUCTOR, CHIP		(2012)
JC104	1-216-295-00	CONDUCTOR, CHIP		(2012)
JC201	1-216-295-00	CONDUCTOR, CHIP		(2012)

Ref. No.	Part No.	Description			Remark
JC202	1-216-295-00	CONDUCTOR, CHIP			(2012)
JC203	1-216-295-00	CONDUCTOR, CHIP			(2012)
JC204	1-216-295-00	CONDUCTOR, CHIP			(2012)
JC301	1-216-295-00	CONDUCTOR, CHIP			(2012)
JC302	1-216-295-00	CONDUCTOR, CHIP			(2012)
JC413	1-216-295-00	CONDUCTOR, CHIP			(2012)
JC602	1-216-295-00	CONDUCTOR, CHIP			(2012)
		< COIL >			
L1	1-410-973-11	INDUCTOR	22uH		
L300	1-411-670-11	COIL, CHOKE	400uH		
L401	1-410-973-11	INDUCTOR	22uH		
L402	1-410-973-11	INDUCTOR	22uH		
L601	1-410-973-11	INDUCTOR	22uH		
L701	1-410-973-11	INDUCTOR	22uH		
		< TRANSISTOR >			
Q3	8-729-021-94	TRANSISTOR	2SK1657-T1B		
Q4	8-729-920-85	TRANSISTOR	2SD1664-QR		
Q5	8-729-920-85	TRANSISTOR	2SD1664-QR		
Q101	8-729-920-21	TRANSISTOR	DTC314TKH04		
Q102	8-729-920-21	TRANSISTOR	DTC314TKH04		
Q201	8-729-920-21	TRANSISTOR	DTC314TKH04		
Q202	8-729-920-21	TRANSISTOR	DTC314TKH04		
Q301	8-729-020-67	TRANSISTOR	XN1A312-TX		
Q451	8-729-821-35	TRANSISTOR	2SD1802FAT-TL		
Q452	8-729-020-67	TRANSISTOR	XN1A312-TX		
Q453	8-729-019-00	TRANSISTOR	2SD2394-G		
Q454	8-729-020-67	TRANSISTOR	XN1A312-TX		
Q701	8-729-424-18	TRANSISTOR	UN2113-TX		
Q751	8-729-422-29	TRANSISTOR	2SD601A-S		
Q752	8-729-424-08	TRANSISTOR	UN2111		
Q902	8-729-429-92	TRANSISTOR	XN1211		
Q951	8-729-020-67	TRANSISTOR	XN1A312-TX		
Q952	8-729-019-00	TRANSISTOR	2SD2394-G		
Q953	8-729-106-60	TRANSISTOR	2SB1115A		
Q954	8-729-424-59	TRANSISTOR	UN2212		
Q955	8-729-920-85	TRANSISTOR	2SD1664-QR		
Q956	8-729-424-59	TRANSISTOR	UN2212		
Q957	8-729-024-31	TRANSISTOR	XN1111-TX		
		< RESISTOR >			
R1	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R4	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R6	1-216-059-00	METAL CHIP	2.7K	5%	1/10W (US)
R6	1-216-053-00	METAL CHIP	1.5K	5%	1/10W (E)
R7	1-216-037-00	METAL CHIP	330	5%	1/10W

Ref. No.	Part No.	Description			Remark
R8	1-216-073-00	METAL CHIP	10K	5%	1/10W
R9	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R01	1-249-441-81	CARBON	100K	5%	1/4W
R10	1-216-073-00	METAL CHIP	10K	5%	1/10W
R11	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R13	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R14	1-216-073-00	METAL CHIP	10K	5%	1/10W
R15	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R16	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R17	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R18	1-216-029-00	METAL CHIP	150	5%	1/10W
R100	1-216-295-00	CONDUCTOR, CHIP			(2012)
R101	1-216-073-00	METAL CHIP	10K	5%	1/10W
R102	1-216-073-00	METAL CHIP	10K	5%	1/10W
R103	1-216-073-00	METAL CHIP	10K	5%	1/10W
R104	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R105	1-216-085-00	METAL CHIP	33K	5%	1/10W
R106	1-216-085-00	METAL CHIP	33K	5%	1/10W
R107	1-216-085-00	METAL CHIP	33K	5%	1/10W
R108	1-216-081-00	METAL CHIP	22K	5%	1/10W
R109	1-216-025-00	METAL CHIP	100	5%	1/10W
R110	1-216-025-00	METAL CHIP	100	5%	1/10W
R112	1-216-081-00	METAL CHIP	22K	5%	1/10W
R113	1-216-837-11	METAL CHIP	22K	5%	1/16W
R121	1-216-073-00	METAL CHIP	10K	5%	1/10W
R122	1-216-073-00	METAL CHIP	10K	5%	1/10W
R123	1-216-849-11	METAL CHIP	220K	5%	1/16W
R124	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R125	1-216-849-11	METAL CHIP	220K	5%	1/16W
R126	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R127	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R128	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R129	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R130	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R161	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R163	1-216-081-00	METAL CHIP	22K	5%	1/10W
R164	1-216-025-00	METAL GLAZE	100	5%	1/10W (US)
R164	1-216-073-00	METAL CHIP	10K	5%	1/10W (E)
R200	1-216-295-00	CONDUCTOR, CHIP			(2012)
R201	1-216-073-00	METAL CHIP	10K	5%	1/10W
R202	1-216-073-00	METAL CHIP	10K	5%	1/10W
R203	1-216-073-00	METAL CHIP	10K	5%	1/10W
R204	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R205	1-216-085-00	METAL CHIP	33K	5%	1/10W
R206	1-216-085-00	METAL CHIP	33K	5%	1/10W
R207	1-216-085-00	METAL CHIP	33K	5%	1/10W
R208	1-216-081-00	METAL CHIP	22K	5%	1/10W
R209	1-216-025-00	METAL CHIP	100	5%	1/10W
R210	1-216-025-00	METAL CHIP	100	5%	1/10W

MAIN

Ref. No.	Part No.	Description			Remark
R212	1-216-837-11	METAL CHIP	22K	5%	1/16W
R213	1-216-081-00	METAL CHIP	22K	5%	1/10W
R221	1-216-073-00	METAL CHIP	10K	5%	1/10W
R222	1-216-073-00	METAL CHIP	10K	5%	1/10W
R223	1-216-849-11	METAL CHIP	220K	5%	1/16W
R224	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R225	1-216-849-11	METAL CHIP	220K	5%	1/16W
R226	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R227	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R228	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R229	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R230	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R261	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R263	1-216-081-00	METAL CHIP	22K	5%	1/10W
R264	1-216-025-00	METAL GLAZE	100	5%	1/10W (US)
R264	1-216-073-00	METAL CHIP	10K	5%	1/10W (E)
R301	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R302	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R303	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R304	1-216-119-00	METAL CHIP	820K	5%	1/10W
R305	1-216-081-00	METAL CHIP	22K	5%	1/10W
R306	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R333	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R401	1-216-210-00	METAL GLAZE	3.3K	5%	1/8W
R402	1-216-210-00	METAL GLAZE	3.3K	5%	1/8W
R403	1-216-210-00	METAL GLAZE	3.3K	5%	1/8W
R404	1-216-210-00	METAL GLAZE	3.3K	5%	1/8W
R405	1-216-210-00	METAL GLAZE	3.3K	5%	1/8W
R406	1-216-210-00	METAL GLAZE	3.3K	5%	1/8W
R407	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R408	1-216-218-00	METAL GLAZE	6.8K	5%	1/8W
R409	1-216-025-00	METAL GLAZE	100	5%	1/10W
R410	1-216-025-00	METAL GLAZE	100	5%	1/10W
R411	1-216-025-00	METAL GLAZE	100	5%	1/10W
R412	1-216-025-00	METAL GLAZE	100	5%	1/10W
R413	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R415	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R416	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R417	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R418	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R419	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R450	1-216-025-00	METAL GLAZE	100	5%	1/10W
R451	1-216-045-00	METAL GLAZE	680	5%	1/10W
R455	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R601	1-216-295-00	CONDUCTOR, CHIP			(2012)
R602	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R603	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R604	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R605	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R609	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R610	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R611	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R612	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R613	1-216-113-00	METAL CHIP	470K	5%	1/10W
R614	1-216-097-00	METAL GLAZE	100K	5%	1/10W (E)
R615	1-216-089-00	METAL GLAZE	47K	5%	1/10W (US)
R616	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R619	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R620	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R621	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R622	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R623	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R624	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R625	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R651	1-216-107-00	METAL CHIP	270K	5%	1/10W
R652	1-216-119-00	METAL CHIP	820K	5%	1/10W
R653	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R654	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R656	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R701	1-216-295-00	CONDUCTOR, CHIP			(2012)
R702	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R703	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R705	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R706	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R709	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R710	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R711	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R712	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R714	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R716	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R718	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R719	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R720	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R721	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R722	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R724	1-216-109-00	METAL CHIP	330K	5%	1/10W
R727	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R728	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R729	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R751	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R752	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R753	1-216-073-00	METAL CHIP	10K	5%	1/10W
R754	1-216-025-00	METAL GLAZE	100	5%	1/10W
R755	1-216-025-00	METAL GLAZE	100	5%	1/10W
R756	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R757	1-216-017-00	METAL GLAZE	47	5%	1/10W
R902	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R903	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R904	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R909	1-216-073-00	METAL CHIP	10K	5%	1/10W
R910	1-216-073-00	METAL CHIP	10K	5%	1/10W
R911	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R912	1-216-077-00	METAL CHIP	15K	5%	1/10W
R913	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R915	1-208-462-41	METAL GLAZE	10K	2%	1/10W
R916	1-208-462-41	METAL GLAZE	10K	2%	1/10W
R917	1-216-025-00	METAL GLAZE	100	5%	1/10W
R918	1-216-025-00	METAL GLAZE	100	5%	1/10W
R920	1-216-025-00	METAL GLAZE	100	5%	1/10W
R921	1-216-025-00	METAL GLAZE	100	5%	1/10W
R922	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R923	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R924	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R925	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R927	1-216-025-00	METAL GLAZE	100	5%	1/10W
R928	1-208-462-41	METAL GLAZE	10K	2%	1/10W
R929	1-208-462-41	METAL GLAZE	10K	2%	1/10W
R950	1-216-033-00	METAL CHIP	220	5%	1/10W
R951	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R952	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R953	1-216-073-00	METAL CHIP	10K	5%	1/10W
R954	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R955	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R956	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R957	1-216-049-00	METAL GLAZE	1K	5%	1/10W

< SWITCH >

SW601	1-571-478-11	SWITCH, SLIDE (CHANNEL SPACE 9k/10k) (E)
SW701	1-571-478-11	SWITCH, SLIDE (POWER SELECT)
SW901	1-692-431-21	SWITCH, TACTILE (RESET)

< TUNER UNIT >

TU1	A-3282-012-A	TUNER UNIT TUX-006(E)

< VIBRATOR >

X1	1-577-126-51	VIBRATOR, CRYSTAL (7.2MHz)
X401	1-579-280-31	VIBRATOR, CRYSTAL (16.9344MHz)
X601	1-579-952-21	VIBRATOR, CERAMIC (8MHz)
X701	1-760-489-11	VIBRATOR, CERAMIC (5MHz)
X702	1-579-886-21	VIBRATOR, CRYSTAL (32.768kHz)

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Ref. No.	Part No.	Description			Remark
*	A-3309-021-A	SERVO BOARD, COMPLETE			
		**********			

< CAPACITOR >

C1	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C2	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C3	1-135-145-11	TANTALUM CHIP	0.47uF	10%	35V
C4	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C5	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C6	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C7	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C9	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C10	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C11	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C12	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C13	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C14	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C15	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C16	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C17	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C18	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C19	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C20	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C21	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C22	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C23	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C24	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C25	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C26	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C27	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C28	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C29	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C30	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C31	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C32	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C33	1-124-779-00	ELECT CHIP	10uF	20%	16V
C34	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C35	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C36	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C37	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C38	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C39	1-126-204-11	ELECT CHIP	47uF	20%	16V
C40	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V

< CONNECTOR >

CN1	1-764-616-12	HOUSING, CONNECTOR (PC BOARD) 30P
CN2	1-565-728-11	CONNECTOR, FPC 17P
CN3	1-770-347-21	CONNECTOR, FPC 6P

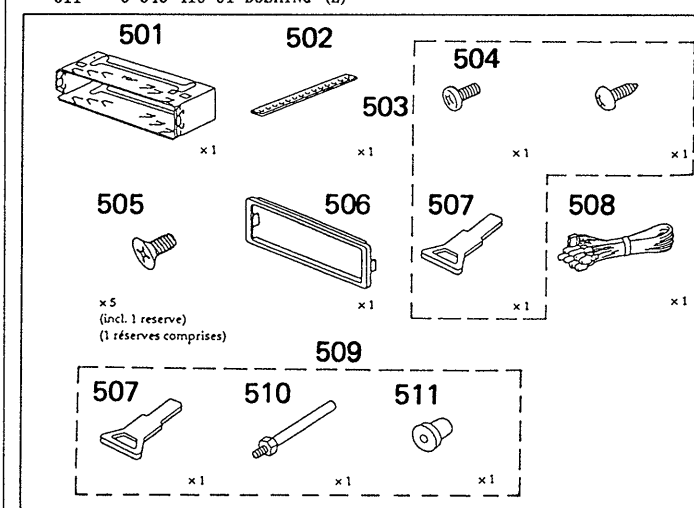
SERVO

Ref. No.	Part No.	Description	Remark
		< IC >	
IC1	8-752-372-94	IC CXD2507AQ	
IC2	8-752-069-56	IC CXA1782BQ	
IC3	8-759-354-16	IC BA6796FP-T1	
		< CHIP CONDUCTOR >	
JR1	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR2	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR3	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR4	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR5	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR6	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR7	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR8	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR9	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR10	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR11	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR12	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR13	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR14	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR15	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR16	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR17	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR18	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR19	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR20	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR21	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR22	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR23	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR24	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR25	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR26	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR27	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR28	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR29	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR30	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR31	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR32	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR33	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR34	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR35	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR36	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR37	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR38	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR39	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR40	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR41	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR42	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR43	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR44	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR45	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR46	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR47	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR48	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR49	1-216-296-00	CONDUCTOR, CHIP (3216)	
JR50	1-216-296-00	CONDUCTOR, CHIP (3216)	
		< COIL >	
L1	1-412-058-11	INDUCTOR CHIP 10uH	
L2	1-412-058-11	INDUCTOR CHIP 10uH	
L3	1-412-058-11	INDUCTOR CHIP 10uH	
		< TRANSISTOR >	
Q1	8-729-904-60	TRANSISTOR DTB113ZK	
Q2	8-729-904-86	TRANSISTOR 2SB1197K-Q	
		< RESISTOR >	
R1	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R2	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R3	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R4	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R5	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R6	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R7	1-216-009-00	METAL CHIP 22 5% 1/10W	
R8	1-216-119-00	METAL CHIP 820K 5% 1/10W	
R9	1-216-119-00	METAL CHIP 820K 5% 1/10W	
R10	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R11	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R14	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R15	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R16	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R17	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R19	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R20	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R21	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R22	1-216-085-00	METAL CHIP 33K 5% 1/10W	
R23	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R24	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R27	1-216-295-00	CONDUCTOR, CHIP (2012)	
R28	1-216-101-00	METAL CHIP 150K 5% 1/10W	
R29	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R30	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R31	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R32	1-216-109-00	METAL CHIP 330K 5% 1/10W	
R33	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R34	1-216-009-00	METAL CHIP 22 5% 1/10W	
R35	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	

Ref. No.	Part No.	Description			Remark
R36	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R37	1-216-117-00	METAL CHIP	680K	5%	1/10W
R38	1-216-109-00	METAL CHIP	330K	5%	1/10W
R39	1-216-101-00	METAL CHIP	150K	5%	1/10W
R40	1-216-114-00	METAL GLAZE	510K	5%	1/10W
R41	1-216-091-00	METAL CHIP	56K	5%	1/10W
R42	1-216-107-00	METAL CHIP	270K	5%	1/10W
R43	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R44	1-216-085-00	METAL CHIP	33K	5%	1/10W
R45	1-216-081-00	METAL CHIP	22K	5%	1/10W
R46	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R47	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R48	1-216-073-00	METAL CHIP	10K	5%	1/10W
R49	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R50	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R51	1-216-295-00	CONDUCTOR, CHIP	(2012)		
		< VARIABLE RESISTOR >			
RV1	1-238-091-11	RES, ADJ, CERMET	22K		
RV4	1-238-091-11	RES, ADJ, CERMET	22K		
*	1-659-834-11	SUB BOARD			
		< CONNECTOR >			
CN1	1-770-347-21	CONNECTOR, FPC 6P			
		MISCELLANEOUS			
12	1-776-207-31	CORD (WITH CONNECTOR) (POWER)			
205	1-659-880-11	MOTOR FLEXIBLE BOARD			
⚠208	8-848-402-02	OPTICAL PICK-UP KSS-520A			
209	1-659-881-11	PICK-UP FLEXIBLE BOARD			
F1	1-532-982-11	FUSE (BRADE TYPE) (AUTO FUSE) (15A)			
M901	X-3371-664-1	MOTOR ASSY (SPINDLE)			
M902	A-3291-574-A	MOTOR ASSY, SLED			
M903	A-3291-576-A	MOTOR SUB ASSY, LO (LOADING)			

HARDWARE LIST

Ref. No.	Part No.	Description	Remark
#1	7-621-773-95	SCREW +PTT 2.6X6 (S)	
#2	7-621-772-10	SCREW +B 2X4	
#3	7-621-770-87	+PTT 2.6X5 (S)	
#5	7-621-770-XX	SCREW +PTT 2.6X8 (S)	
#6	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT	
#7	7-627-553-37	PRECISION SCREW +P 2X3 TYPE 3	
#8	7-627-553-17	PRECISION SCREW +P 2X2 TYPE 3	
#9	7-627-000-00	SCREW, PRECISION +P 1.7X2.2 TYPE 3	
#10	7-627-850-28	SCREW, PRECISION +P 1.4X3	
#11	7-621-770-67	+PTT 2.6X6 (S)	
		ACCESSORIES & PACKING MATERIALS	
	3-856-126-11	MANUAL, INSTRUCTION (ENGLISH) (US)	
	3-856-126-21	MANUAL, INSTRUCTION (ENGLISH, SPANISH, CHINESE) (E)	
	3-856-127-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH) (US)	
	3-856-127-21	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, CHINESE) (E)	
	X-3369-665-1	CASE ASSY (for FRONT PANEL)	
		MOUNTING HARDWARE	
501	3-931-986-11	FRAME, FITTING	
502	3-916-012-01	BRACKET (ND), FITTING	
503	X-3370-076-1	SCREW ASSY (U.KEY), FITTING (US)	
504	7-682-560-04	SCREW +P 4X6 (US)	
505	X-3371-913-1	SCREW ASSY (J)	
506	3-932-910-01	COLLAR (E)	
506	3-932-910-11	COLLAR (US)	
507	3-388-078-01	KEY	
508	1-776-207-31	CORD (WITH CONNECTOR) (POWER)	
509	X-3370-077-1	SCREW ASSY (KEY), FITTING (E)	
510	3-386-828-01	SCREW, FITTING (E)	
511	3-349-410-01	BUSHING (E)	



The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.

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Sony Corporation
Mobile Electronics Company

CDX-C410

SONY

SERVICE MANUAL

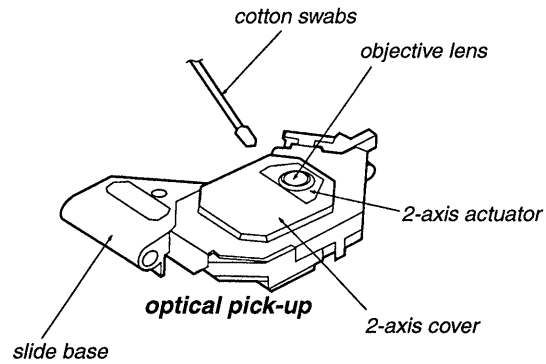
US Model
E Model

SUPPLEMENT-1

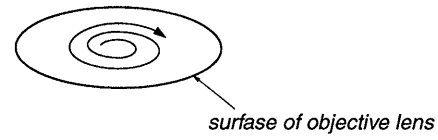
File this supplement with the service manual.

Subject : Notes on Cleaning The Objective Lens

NOTES ON CLEANING THE OBJECTIVE LENS



Apply CD lens cleaner B-4 (Part No.: J-2501-000-A) to cotton swabs (narrow type) (Part No.: J-2501-023-A) to be lightly wet. Use a force (about 5 g (0.18 oz)) to make the objective lens in contact with the bottom lightly, and clean the lens by spirals as following below.
Replace the cotton swab and repeat this cleaning two or three times.



Notes:
Do not force to push the objective lens. Otherwise, the plate spring supporting the objective lens will be bent, causing a deteriorated RF waveform.
Never touch anything other than the objective lens. Otherwise, a significant deterioration occurs in the RF waveform.

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CDX-C410

SONY

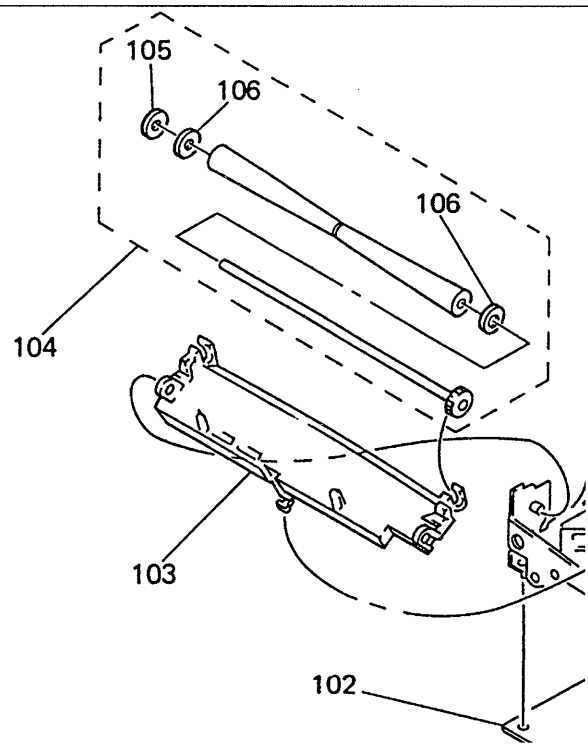
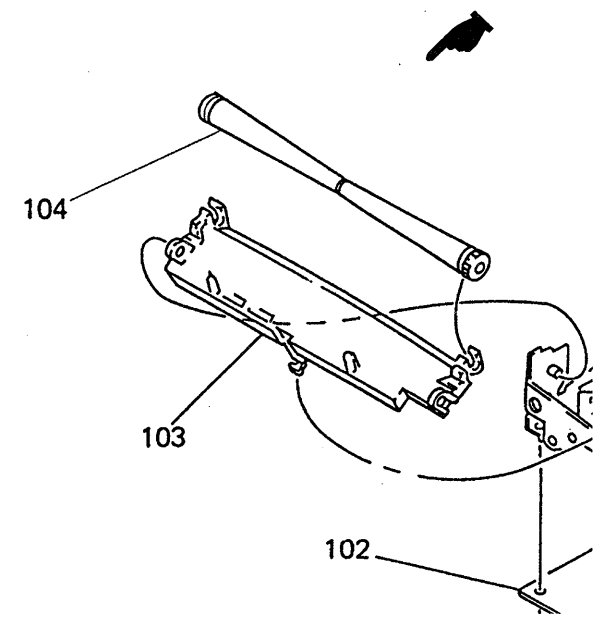
SERVICE MANUAL

US Model
E Model

CORRECTION-1

Correct your service manual as shown below.

☛ : indicates corrected portion.

Page	INCORRECT			CORRECT		
	No.	Part No.	Description	No.	Part No.	Description
46	105	3-701-439-11	WASHER			
	*106	3-322-413-01	SPACER, INSULATING			
						

(SPM-96051)

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